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The publishing history and development of school atlases and British geography, *c.*1870–*c.*1930

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Abstract

My concern in this thesis is with the production of British school atlases between 1870 and 1930. I interpret this particular genre of map and book through the rich resource of the Bartholomew Archive, which holds the business and personal records of the Edinburgh mapmaking firm John Bartholomew & Son. School atlases were instrumental in the dissemination of geographical knowledge at a time when geographers were moulding their subject's place in the universities and schools in Britain and in parts of the Empire beyond. This thesis builds on concepts in the history of the book, the history of the map and archive history in order to gain knowledge about the people and processes through which this particular type of mapbook was produced, moved and used, and to understand how it was bound up in the development of a discipline.

In chapter 1, I outline the main themes of the thesis. The theoretical and methodological ideas underlying it are reviewed in detail in chapter 2. Chapter 3 illuminates the themes threading through the following empirical chapters, providing insight into school atlas production through a consideration of Bartholomew's production ledgers and what these reveal about the nature of geographical publishing. Interactions between individual atlas producers form the focus of chapter 4, particularly negotiations between publishers, mapmakers, geographers and other professionals over the meaning of 'author'. In chapter 5, I go on to address atlas production in relation to the pedagogy of regional geography used in schools and, particularly, its impact on school atlases for pupils in 'local' settings across the UK. This leads in chapter 6 to an interpretation of how this localising of school atlases was adapted to readers' locations throughout the British Empire. Questions about readers' role in the shaping of textual meaning are considered further in chapter 7, which draws on specific instances of producer-reader-atlas interactions to support the argument that reading and reviewing were processes conducted not only, as I show, by readers on the published text but, as I also indicate, they were practices performed by both producers and readers during atlas production.

My findings in this thesis shed light on the publishing history of British school atlases, hitherto largely unexamined by historians of the map and historians of geography, and they contribute to our understanding of the production, movement and use of geographical knowledge in the late nineteenth and early twentieth centuries.

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Declaration

I hereby declare that this thesis has been composed by me, that the work is my own, and that it has not been submitted for any other degree or professional qualification.

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Abbreviations

ASTG (Association of Scottish Teachers of Geography)

BAAS (British Association for the Advancement of Science)

BL (British Library)

CB (Correspondence Block)

CRC (centre for research collections)

DB (Day Books)

EUL (Edinburgh University Library)

GA (Geographical Association)

IB (Invoice Books)

IBG (Institute of British Geographers)

LCC (London County Council)

LMA (London Metropolitan Archives)

NLS (National Library of Scotland)

OUP (Oxford University Press)

PR (Printing Record)

RGS (Royal Geographical Society)

RSGS (Royal Scottish Geographical Society)

SAGT (Scottish Association of Geography Teachers)

SBL (School Board for London)

SCRO (Sheffield City Record Office)

SED (Scotch and later Scottish Education department)

1

Introduction: the production history of British school atlases (*c.*1870–*c.*1930)

This thesis is concerned with the production history of British school atlases in the period *c.*1870–*c.*1930. My finings are based on research in the collections of the Bartholomew Archive, which holds hitherto unexamined records from the Edinburgh firm John Bartholomew & Son, active in mapmaking and publishing between 1880 and *c.*1987. The firm's records indicate the extent and nature of atlas production and, supplemented by other publishers' collections, they provide an important resource for the production history of school atlases. My concern here is to explore how geography operated as a textual tradition and, specifically, how geographical knowledge was produced, disseminated and used in and through this genre of mapbook and particular type of school text. This is informed by the belief that 'the production and reception of geographical and other texts is crucial to understanding the development of a discipline'—and vice versa.[1]

School atlases were embedded in broader political, economic, and cultural circumstances, and my period of interest incorporates both what has been called the apex of Britain's imperial activities and a time in the history of geography and education generally when school education became increasingly standardised and school texts (including atlases) facilitated and responded to this development.[2] These contextual influences thread through the chapters of this thesis and inform the more intricate details of school atlas production—the people and processes involved—upon which the chapters are based. I take a production approach to questions addressed by book historians, historians of science, historians of geography, and map historians over the construction of knowledge and its dissemination in texts.

[1] Maddrell (2009), 13.
[2] The link between developments in Empire, geography, and publishing has been addressed, in part, by Maddrell (1998); Ploszajska (2009); and Walford (2001).

Introduction

This thesis adds to previous studies on geography's school textbooks by paying attention to a distinct and neglected type of geography book.[3] In this way, it aims to contribute to knowledge about the production, dissemination and reception of geographical knowledge. At the same time, as books of maps, school atlases are part of the tradition of map and atlas production analysed by map historians. They have, however, received limited attention in this regard, historians of the map so far focusing on more popular and earlier genres of atlas.[4] My aim is to add to the production histories of the map and the atlas by elucidating the importance of mapmaker-publishers' production records, which illuminate not only the volume and chronology of map and atlas production and its social and cultural situatedness, but also interactions between individual publishers, mapmakers, geographers, other professionals and the institutions involved in production.[5] My thesis contributes to this social and cultural approach in map history—advanced, *inter alios*, by Harley, Woodward, Edney and Jacob—by drawing on ideas in book history and in the history of science on the production, movement and reception of knowledge.[6] I do this on the premise that 'book history, in short, has much to offer the study of works of geography, atlases perhaps especially as that genre of publishing became established, popularised and public'.[7]

This specific genre of 'mapbook'—the school atlas—was produced for and utilised in the teaching of geography to pupils throughout the Empire. School atlases became a tool for geographers attempting to shape their discipline in the universities, since they provided a medium for the consolidation and dissemination of ideas about the subject's disciplinary content and purpose. Some persons saw school atlases as essential in the teaching of geography as a 'science' in schools: Andrew J. Herbertson, reader in geography at Oxford University, commented that 'an atlas is essential but a textbook is not demanded'.[8] For geography teachers, atlases were

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[3] Geography textbooks have been studied largely by Madrell (1996; 1998). Ploszajska (1996; 1998; 1999) has focused on the use of other geography apparatus including wall maps and models, as well as the use of fieldwork in London schools.
[4] Akerman (1995; 2005); Goffart (2003); Winearls (2005); Withers (2005).
[5] Pedley's (2005) and Heffernan's (2009) works represent socially and culturally sensitive production histories of maps.
[6] Harley (1987; 1988; 1989a; 1989b); Harley and Woodward (1987; 1992; 1994); Woodward and Lewis (1998); Woodward (2007).
[7] Withers (2005), 299.
[8] Herbertson (1906), 281.

similarly an important part of the training of students to conceptualise and understand the world: Celia Evans, a teacher of geography, believed that in the school geography room 'every child should possess some good atlas'.[9]

In the light of the importance of school atlases in geographical education, one question this thesis attempts to answer is who was influential in the communication of knowledge through school atlases and how their opinions and activities were manifest in the published text. Just as school textbooks have been revealed as sites of conjuncture between 'academics, learned societies, travellers, educationalists . . . publishers . . . [and] the geographical imaginations of children at home and in schools', so too school atlases present a textual manifestation of interactions between 'geography's professionals', school teachers, publishers, mapmakers, and geographical and/or educational bodies in the production of geographical knowledge.[10] It is the specificities of these interactions—the iterative communications and exchange of knowledge—between these individuals and individual institutions in the production of particular school atlases with which I am, in part, concerned in this thesis. My approach is informed by the belief that 'the challenge for histories and geographies of the book is to understand the complex processes whereby these communication practices, these books and manuscripts, and a panoply of speakers, readers and writers, came into contact with each other'.[11] This leads me to ask questions about the 'authoring' of school atlases and, specifically, the function of 'author' in particular atlases, which, I hope to show, was a process negotiated, contested and constructed between mapmakers, publishers, geographers, other professionals, and institutions.

This study of producers is enabled, in part, because school atlases—their style and content—provide a textual manifestation of the negotiations mapmakers, publishers, geographers, and other professionals conducted in the production of a text. This thesis is not, then, a historical geography of geography as a discipline in the universities and schools. But it does attempt to situate school atlases within their intellectual history and to reveal something about the historical geography of their production, movement and reception as works of geography at a time when

[9] Evans (1925), 237.
[10] Maddrell (1998), 81.
[11] Ogborn and Withers (2010), 42.

geography was, for one reason or another, establishing itself as a discipline, a science and a subject in the university and school curriculum.

The link between geography's history in the universities and in schools and between its disciplinary history and its textual traditions, however, was often oblique. Referring to John Scott Keltie's Exhibition of Geographical Appliances in 1885, John George Bartholomew, mapmaker-publisher—observing the British school atlases displayed—remarked that 'they [British atlases] have served their day, and made good commercial returns; and it is only reasonable that they should now retire from public life before they get laughed at. British school atlases are very numerous, but only of mediocre quality for teaching purposes'.[12] Bartholomew's verdict echoed that of Keltie, and other geographers at the time, who were lamenting geography's lowly position in Britain's educational system, according to them particularly evident when compared with geographical education on the Continent, namely in Germany, and also in relation to the apparatus used to teach it.[13]

Anxiety over geography's place in higher and school education was, concomitantly, an impetus to explicate and discuss the subject's scientific status and to evaluate its worth in relation to the education of pupils and students.[14] Bartholomew thus saw Keltie's report and exhibition as an important step towards geography's reformation. Similarly, despite his findings that British geography was in a poor state, Keltie believed that it was 'in the power and within the scope of our Society [the Royal Geographical Society] to supply the necessary impulse to induce the bodies that rule or direct the course of British education to take up geography in an intelligent spirit'. In fact, for my purposes here, it is important to note that Keltie advocated an informal agreement between the council of the Royal Geographical Society (RGS) and publishers to 'encourage the production of text-books and atlases, framed in accordance with their [the RGS'] scheme, by offering to affix their imprimatur on any which seemed to satisfy their requirements'.[15]

In this thesis I am, therefore, concerned with the interdependence between school atlases and geography's development. Reflecting on geography's by-then

[12] Bartholomew (1886), 31.
[13] Keltie (1885).
[14] Bryce (1902); Chisholm (1908); Close (1911, 1912); Davis (1898); Herbertson (1902a); Keltie (1886, 1915); Mackinder (1887, 1921); Mill (1892).
[15] Keltie (1885), 75, 78.

acceptance as a university subject in 1917, Keltie observed the connection between university and school geography: owing to the emergence of 'younger geographers' from the universities, there was a community of geographers to aid the promotion of geography in education and improve the texts used to teach it: 'the old dull text-books and featureless maps have almost disappeared, and others modelled on the reformed conception of the subject have taken their place'.[16] For an anonymous writer in *The Geographical Teacher* in 1892, however, improvements to the text books, maps and atlases used in geographical education were down to the 'publishing houses' involved in their production.[17] Writing in 1914, W. T. Barton similarly revealed that 'in the atlases designed for school use . . . if there is still large room for improvement, there is nobody who desires more to improve atlases than the publishers'. Responding to Barton, mapmaker-publisher William Stanford agreed that 'we publishers are only too anxious to help in the movement for the better teaching of geography . . . [but] there is the question of expense'.[18] In reality, as I hope to show here, all of these individuals and bodies—educationalists/geographers, institutions, mapmakers, publishers—and their different ways of seeing helped shape the production of school atlases in certain places and periods. My concern with production elucidates the questions addressed in this thesis on the role which individual geographers, mapmakers, publishers and institutions played in the communication of geographical knowledge in map and book form and, simultaneously, the connection between university and school geography and between atlas production and disciplinary progress.

The second broad question framing my research concerns the association between geography's progress as a discipline and the material format (and content) of geography's texts. This has been addressed by Mayhew in relation to geography's literary texts, in his proposing a material hermeneutics of geography's texts in order to reveal the meaning residing in prefatory features like titles, introductory notes, footnotes and so on.[19] My concern in this thesis is thus, in part, with a textual study of school atlases, interpreting these mapbooks as indicators of geography's character

[16] Keltie (1917), 364.
[17] Anonymous (1902a), 87.
[18] Barton (1914), 238; Stanford in Barton (1924), 247.
[19] Mayhew (2007b).

in a particular time and place and as tools utilised by geographers and others to promulgate particular views about the world.

The third and related broad question I address—in addition to who produced specific atlases and the impact of broader geographical discourses on style and content—is who was the audience, and what was the audience's effect on textual meaning? Atlases were produced for pupils in distinct locations throughout the Empire, from Britain to Australasia, and their format and knowledge content were both informed by anticipated and actual geographies of reading. As I show in reference to Darnton's 'communications circuit', which conceptualises the production process of a book from 'author' to 'reader' (see chapter 2, 22), the 'implicit reader' shapes the production process because of producers' understanding of and encounter with particular readers' perceived needs and wants.[20]

In these ways, this thesis is more than a production history. It is also concerned with how atlases were made to move between producers and readers in Britain and between producers and readers in other parts of the Empire. This thesis is therefore an examination of a production history and a history and geography of what Secord has called 'knowledge in transit' or what Ophir and Shapin describe as the 'translation of knowledge': how were atlases for particular readers in distinct locations produced differently to make them relevant and readable?[21] In such ways, the work begins to undermine the essential categories 'author' and 'reader' since producers were both indirectly (having 'implicit readers' in mind) and directly (through demands from actual readers), interacting with atlas users.

This questioning of 'author' and 'reader' is further addressed through an analysis of the connection between reading and reviewing; and production and reception. These topics have been addressed by historians of the book, of science, and of geography, chiefly in relation to what is often described as the understudied and/or unavailable reception history of texts.[22] In relation to reading and reviewing, I interpret these processes in the thesis in the light of how they informed the reproduction of atlases, and production and reception are too addressed to elucidate the more complicated and blurred distinction between them, both in terms of the

[20] Darnton (1982).
[21] Secord (2004); Ophir and Shapin (1991).
[22] Keighren (2006, 2010).

occurrence of reading and reviewing during production at the hands of producers, and in relation to the conducting of processes of authoring by readers during reception.

A note on thesis structure

Informed by the view that 'production, circulation and consumption need to be considered together', I deal in turn with aspects of school atlas production, their movement and use, and I do this through the framework of certain themes.[23] I have avoided a wholly chronological structure of atlas production in order to guard against a presentist perspective and in order to elucidate the people, processes, and discursive principles threading though each chapter. The thesis might have been ordered along the trajectory of production, dissemination and reception—and to some extent it is—but, in a strict sense, my consideration of these features, as indicated above, is orientated by my dependence on publishers' records of atlas production. This structure is informed not only by the availability but also by the absence of resources which would allow a more in-depth history of atlas reception, in the strict sense of the term. The atlases I analyse here are largely devoid of marginalia in the published texts and there are, unsurprisingly, no records of pupils' personal interpretations of particular atlases in diary form. The topics and themes covered in the chapters to follow, outlined in more detail below, flow from a heavily production perspective on school atlases (chapters 3–4), to analysis of how knowledge was made to move throughout the Empire in school atlases (chapters 5–6), and, finally, to the role of readers, and reading and reviewing, in the production of school atlases (chapter 7).

Chapter two is intended to set the contextual frame. It provides a review of studies to date in the history of geography, outlining the contextual and textual approaches upon which these are based, before positioning the thesis in relation to developments in book history and map history on the production, dissemination and use of books and maps, respectively. Here, concepts in archive history are addressed in relation to their importance for my engagement with publishing archives and my attempts to reconstitute authoritative claims about geography's textual production in

[23] Ogborn and Withers (2010), 50.

the past. Together, these intellectual traditions provide the justification, impetus and know-how to conduct a history and geography of school atlas publishing. In chapter three, I take, in part, a prosopographical approach that is apparent throughout the succeeding chapters: Bartholomew's day books and invoice books provide a means to understand the chronology of atlas production but they also point to the importance of an analysis of the different people shaping atlas style and content and the reasoning behind their decision making.

Networks of communication in the production of a single atlas are deconstructed further in chapter four. Here, the category 'author', outlined in Darnton's 'communication circuit' and challenged by literary critics and book historians, is deconstructed along with 'mapmaker', 'publisher', and 'editor' to reveal that while these terms are helpful in explaining producers' roles, more can be understood about the people and practices involved in atlas production if we combine analysis of the published atlas with correspondence between producers and editorial notes on draft versions.[24] In chapters five and six, the production focus of my thesis turns towards consideration of the simultaneous translation and transformation of knowledge from one place to another. In chapter 5, I address how atlas style and content were made 'local' for atlas users in distinct parts of the UK, as well as the practice of localising atlases to the regional approach in geographical education, where pupils learnt about the globe from known to unknown parts. My focus here is also on the interactions between publishers-mapmakers and those geographical and/or educational bodies responsible for moulding geography's character and for the provision of apparatus (including atlases).

My concern in chapter six is with the (re)adapting of atlases to readers' location in particular parts of the Empire beyond Britain. This too was embedded in communication between publishers, mapmakers, geographers and other professionals, some of whom had a greater allegiance to Empire than others, others who had a concern for the 'new' national character of imperial locations, and many of whom were located in distinct parts of the Empire. Related to this theme of the influence perceived and actual geographies of reading had in atlas production, chapter seven illuminates the role reception (reading and reviewing) played in the

[24] Darnton (1982).

production of atlases, both in relation to readers' authorial processes and in terms of producers' reading and reviewing practices.

As a whole, in this thesis I attempt to demonstrate the value of publishers' production records in understanding the production, movement and use of a particular genre of mapbook. I am also concerned with the utility of book history in more fully understanding the 'who' and the 'where' of atlas production and relating these to the development of the discipline of geography. I thus seek to contribute to existing knowledge about geography's textual traditions, illuminating the texts, and the people, through which the discipline's character was negotiated over time and space.

2

British school atlases: geography apparatus, books, and maps

Introduction

By focusing on a particular genre of geography text and a certain type of atlas, my research crosses three conceptual boundaries: these include the history of geography, book history and map history. This thesis follows the example of studies in historical geography and atlas history by drawing on ideas in book history to inform my concern with school atlases.[1] There is, I suggest, much more to know about the production, dissemination and reception of geographical knowledge and, specifically, how these processes occurred in relation to geography's apparatus (including texts, maps, atlases, models, and so on). In particular, this chapter proposes that a study of school atlases can proceed from a combination of a contextual approach—examining the people and broader discursive influences involved in geography's development—with a textual analysis of geography's books, considering the where, how, and by whom geographical knowledge was produced and received through school atlases.

This chapter first discusses how historians of geography have outlined the main events and individuals involved in geography's progress in the universities and schools, emphasising the interconnected imperial and institutional contexts of the subject's development.[2] It then, secondly, illustrates book historians' engagement with the production, dissemination and reception of knowledge, and their emphasis on the importance of the individual publisher, editor, author, bookseller and reader—and their relationships—in the production of textual meaning before, during and after the published text was 'completed': Darnton's 'communications circuit', for example, attempts to conceptualise the communication between the people involved in a book's production, movement and reading, as well as the role of external political and economic influences on these associations, but more recently, historical geographers and historians of science have highlighted the movement of knowledge

[1] For example, Mayhew (2007b); Withers (2005).
[2] Johnston (2003); Livingstone (2003); Stoddart (1975, 1980); Walford (1996); Withers (2001a).

across space and the translation (both linguistically and other) and transformation required for the appropriation of a text in a distinct location.[3] The third point covered in this chapter is map historians' consideration of the people and practices shaping what have been described as the explicit and implicit political and cultural messages embedded in maps and atlases—their content and style.[4]

By outlining developments in these three fields of study—the history of geography, map history and book history—I then illustrate how through the use of concepts in the history of the book my thesis seeks to analyse in detail the people and processes through which geographical knowledge was produced, moved and used in school atlases—a specific type of geography text and a particular genre of atlas.

The utility of book history in a study of atlases has been demonstrated, in part, by historians of geography, examining geography's texts to date, emphasising the affinity between their material format—a concern raised initially by book historians—and the character of the discipline in the universities and schools; and between broader political and economic developments and the geographical knowledge presented in their literary and illustrative content.[5] Less attention of this nature has been given to atlases: there has, however, been an increased questioning of atlas authorship in line with debates in the history of the book over the role of 'author' and 'reader' in the production of a text's meaning and focus has been given to the more complex character of categories like 'mapmaker', engraver, 'publisher' and 'editor'.[6] This chapter, however, demonstrates that we must go further to understand the production and use both of geography's texts and of atlases—in this case school atlases—through greater engagement with ideas in book history.

To do this I depend on the Bartholomew Archive, which holds the production and business records of the Edinburgh mapmaker and publisher John Bartholomew & Son. This chapter positions my research in the Bartholomew Archive and in other publishers' and supplementary archives in order to indicate my reliance not only on concepts in the history of geography, map history and book history, but also on ideas in archive history about the construction of knowledge in and through archives. The

[3] Darton (1982); Keighren (2010); Livingstone (2007, 2008); Rupke (2000); Secord (2000).
[4] Delano-Smith (1996); Edney (1996, 2007); Harely (1987, 1988, 1989a, 1989b, 1997, 2001); Pedley (2005).
[5] Mayhew (2007b); Maddrell (1996). Ploszajska (1999).
[6] Akerman (2005); Winearls (2005); Withers (2005).

methodological questions arising from my research, and which I present here, provide a way to more fully understand the production, movement and use of school atlases in their specific intellectual, political, cultural and economic contexts, and in the light of the different people and processes involved.

Historical geographies: the development of the discipline

School atlases must be situated within their intellectual context, namely the progress of geography as a discipline in Britain's universities and schools. Most scholars addressing the history of geography do so through a contextual-based methodology, no longer justifying the subject's character in teleological explanations but recognising the particular discursive principles influencing understandings of the world in particular places and in certain periods.[7] It is apparent that geography's practitioners and 'texts' were embedded in specific social, political, economic and cultural contexts, functioning at different scales from the global, to the national, and the local.

The locational nature of geography's development is particularly evident in studies of what has been called by historians of geography the 'imperial drive' in geography's professionalisation in Britain's universities.[8] This wave of institutionalisation was initiated, in part, by the establishment of a school of geography at Oxford in 1887, closely followed by one in Cambridge in 1888. In relation to the former, the imperial undertone was present in a statement in *The Times* in 1887 which noted that 'the serious mistakes made and the risks of war incurred by geographical ignorance have often been referred to; with the establishment of this school [at Oxford] there will be no excuse for such ignorance among those who have the conduct of the Empire's affairs'.[9] In Scotland, the subject was also bound up in discourses about Empire and citizenship but geography's institutionalisation in Scotland began later than its English counterpart: geography as a topic had a long presence at the University of Edinburgh with geographical topics incorporated into other topics long before the discipline received an official teaching post in 1908. At this time, it was George Goudie Chisholm who took up the first Chair in geography

[7] For traditional histories on geography's development in the universities see Johnston (2003); and Stoddart (1967, 1975). More critical histories include Livingstone (2003); Withers (2001a, 2002).
[8] Withers (2001a).
[9] Quoted in Withers (2001a), 86.

at Edinburgh, and at the University of Aberdeen geography was formalised as a discipline in 1898.[10]

The development of geography in the schools was inextricably linked to this professionalisation in the universities and to the same imperial drive. For Walford, the 'height of empire' led to significant occurrences for school geography, including the transport revolution which made knowledge of the empire accessible to all; unprecedented population growth in Canada and Australia from British migrants; the British Raj's establishment in India; and the 'scramble for Africa', which resulted in European powers, particularly Britain and France, establishing their control on the continent. Walford therefore notes that 'the imperial imperative was clearly dominant as the major sub-text of geographical learning in schools in the latter part of the nineteenth century'.[11] Geography's teaching in the universities and schools, however, was not simply *influenced* by Britain's imperial pursuits but, through the methods and knowledge presented, the subject became a tool in the imperial narrative.

This imperial impetus to geography's progress was intertwined with national educational developments. The institutionalisation of geography in the universities was preceded by an important development in elementary education, namely the 1870 Elementary or Foster's Education Act in England and Wales (and 1872 in Scotland), which provided elementary education to all. Later developments included, *inter alia*, the 1905 regulations for the teaching of geography, emphasising the importance of knowing both home and colonial lands; and the inclusion of geography in the Board of Education's regulations for Advanced Courses in secondary schools in the late 1920s. Teaching in secondary schools received less attention, although the Balfour Act of 1903 abolished the school boards—the previous administrators of education—and initiated state provided secondary education.[12]

The 1870 Elementary Education Act in England and Wales and a similar Act in Scotland in 1872 provided free primary education for all children. In England and Wales, schooling became compulsory for the working classes in 1880 and free from

[10] Withers (2001a).
[11] Walford (2001), 54.
[12] See Ploszajska (1999); Maddrell (1996,1998); Walford (2001).

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1892 onwards.[13] After Acts on Elementary Education reforms to Secondary Education came into focus. **Table provides** a summary of important Education Acts and regulations for Primary and Secondary Education in the UK, *c.*1870-*c.*1930:

Table 2.1. Education Acts in Elementary and Secondary Education in England, Wales and Scotland, *c.* 1870-*c.*1920 (sources: Walford, 2001; Maddrell, 1998)

Year	Education Act	Brief description
1870 (England and Wales) and 1872 (Scotland)	The Elementary Education Act/ Forster's Education Act (England)	The very first piece of legislation to deal specifically with the provision of education in Britain. It established a system of 'school boards' to build and manage schools in areas where they were needed, in an attempt to make primary education available to all.
1880	The Elementary Education Act	By 1880 many new schools had been set up by the boards. This made it possible for the 1880 Education Act to make school attendance compulsory for all children up to the age of ten.
1891	1891 Elementary Education Act 1891	Elementary education to be provided free.
1893	1893 Education Act	School leaving age rose to 11.
1895	The Bryce Commission/Secondary Education Act.	The Bryce Commission – proposed a centralised authority to combine major aspects of education under one government minister.
1899	1899 Board of Education Act	Established the Board of Education. School leaving age raised to 12.

[13] Maddrell (1998).

1900	Cockerton Judgement	In 1900 the Local Government auditor, Cockerton, brought a law case in the High Court against the School Board for which he claimed the board exceeded its powers in teaching certain branches of science and art in higher grade and evening schools.
1902/1903	The Balfour Act	Following the 'Cockerton Judgement' the school boards were abolished. In their place Local Educational Authorities (LEAs) were created. This Act initiated state provided secondary education. As a result there was a massive expansion in the building of secondary schools in the years up to 1914.
1904	Regulations for Secondary Schools	In 1904 the Board of Education published the first of its annual Regulations for Secondary Schools, defining a four year subject-based course leading to a certificate in English language and literature, geography, history, a foreign language, mathematics, science, drawing, manual work, physical training, and, for girls, housewifery**.** Maddrell indicates that this act stipulated that the purpose of elementary education was concerned with 'assisting both girls and boys, according to their different needs, to fit themselves practically as

		well as intellectually, for the work of life'.[14]
1907	Education (Administrative Provisions) Act	This Act (28 August 1907) established the scholarship and free place system for secondary education (which already existed in some areas), designed to give promising children from elementary schools the opportunity to go to secondary schools
1909	1909 Board of Education consultation paper	Recommended introduction of 'day continuation education' for school leavers.
1917	Lewis Report	Proposed school leaving age of 14 with no exemptions, followed by attendance for at least 8 hours a week or 320 hours a year at day continuation classes up to age 18.
1918	The Education Act/ The Fisher Act in England	School became obligatory for all children up to the age of 14.
1921	Education Act	Consolidated all previous laws relating to education.
1923	1923 Hadow Report	UK Government referred a number of topics for enquiry to the Consultative Committee of the Board of Education, then chaired by Sir William Henry Hadow. These led to a number of reports on School education. There was also a differentiation in the Curriculum between boys and girls in Secondary Schools.
1926	Hadow Report	Further reports on school

[14] Maddrell (2009), 124.

		education in 1926, 1931 and 1933. Their main influence was that they resulted in separate and distinctive educational practise for children aged 5-7 (infants) and those aged 7-11 (juniors). The Education of the Adolescent proposed junior and senior schools with transfer at age 11; secondary education for all; and an increase in the school leaving age to 15.

The above is by no means an exhaustive list of educational acts or government reports on primary and secondary education but it gives an indication of some key developments. As Maddrell notes, these developments are indicative of the specific value attached to the role of education in society.[15] Yet it is difficult to measure the impact these changes in broader education had on the teaching of geography in schools and, more specifically, how they shaped geographical publishing. There is perhaps a need to look further into the content of some of these acts and regulations but such a project is not the purpose of this thesis.

What we know, however, is that towards the late nineteenth century the greater availability of primary and secondary education for the general population was concomitant with the increased demand and supply of school texts, including school atlases. This was a natural consequence of the greater number of pupils being educated in geography: schooling became compulsory for the working classes in 1880 and free from 1892 onwards.[16] In addition, the consolidation of systematic examinations, curricula, and school inspections served to homogenise and systematise the content of teaching, including geography. For example, in relation to England and Wales, in the 1880s the Department of Education revised the instructions to school inspectors, requiring them to pay most attention to teaching on the English colonies. This imperial drive also fed into the training of intending

[15] Maddrell (1998).
[16] Maddrell (1998).

school teachers in the universities and training colleges. The King's Scholarship examinations for teachers always started with British possessions in the region, including their products and trade routes, giving particular attention to South Africa and other significant areas.[17] This all reflected the imperial impetus evident in the rhetoric used to describe university geography and it indicates how inspection, examination and teacher training directed the teaching of geography, as teachers sought to ensure students met particular curricula.

Developments in education in Scotland were, broadly speaking, similar to geography's development in England, and the effect on geographical teaching in Scottish schools too followed many of the same paths (see chapter 5). For instance, the Scottish Education Department introduced a Leaving Certificate Examination in 1888 which established national standards for secondary education. As education became universal in England, so in 1890 school fees were abolished in Scotland and a state-funded national system of free basic education and common examinations prevailed. Similarly, as the school age in English schools was raised, so too the school age in Scottish schools rose to 14 in 1901. Yet, distinctions in Scottish geographical education have been highlighted for the period before 1870, such as the greater religious content of school texts in parochial Scottish schools in the mid nineteenth century compared with their English counterparts.[18] But since my intention here is not a historical geography of school geography but, rather, a publishing history of a particular genre of school text in relation to one map-making and publishing firm, I will not dwell on the details of Scottish geography's curricula, inspection and examination, which is another project that perhaps still needs to be fully carried out for the period 1870–1930. My discussion on the character of geography's development in English, Welsh and Scottish schools does go further in chapter 5 of this thesis in relation, specifically, to the part the leading geographical bodies played in geographical publishing in these locations.

An institutional approach to the history of geography

Developments in broader education and the greater demand and supply of school texts were among the topics discussed among members of the leading geographical

[17] Maddrell (1996).
[18] Withers (2001).

societies as they negotiated their role in geographical education. It is to an institutional approach to the history of geography that I briefly turn.

The imperialist desire to eradicate geographical ignorance and the national drive for improved education was closely linked to the activities of civic bodies like the GA, which were avidly promoting geography as a science in higher and school education. Some scholars have therefore taken an institutional approach to the history of the subject. Whilst the GA played an important part in this, scholars have focused principally on the role of the RGS in the development of geography's educational status in the universities and, in part, its activities in relation to geography's progress in schools.[19]

For Stoddart, the RGS was the main agent in promoting geography in the universities, particularly in the cases of the Oxford School of Geography and the Cambridge School of geography, the Society's members supporting the provision of the first geography lectureships in both cases.[20] According to Livingstone, not only in the universities but also in the schools, the RGS was a major force promoting the subject and, concomitantly, securing the subject's place as a modern university discipline: the RGS 'has been at one and the same time a centre of calculation, a place of accumulation, a space of exhibition, a debating chamber on foreign policy, a site of conversation, a publication house, a reading room, and a theatre of communication'.[21]

A focus among scholars on the RGS in the progress of geography and on its activities in knowledge production has led to a neglect of other institutions in the moulding of the discipline. Other institutions include, as mentioned, the GA, as well as the Royal Scottish Geographical Society (RSGS), and the British Association for the Advancement of Science (BAAS). This lacuna has been addressed by some historians of geography in studying distinctions in the imperial and educational agendas between the RGS, established in 1893, and the provincial Scottish, Manchester, Liverpool, Tyneside, Southampton and Hull societies—formed in the 1880s and 1890s.[22] Whilst the provincial societies shared the same imperial drive

[19] Balchin (1993); Freeman (1984); Livingstone (2003); MacKenzie (1995); Stoddart (1980); Withers (2001b).
[20] Stoddart (1980).
[21] Livingstone (2003), 19.
[22] Lochhead (1981); Mackenzie (1995); Withers (2001b).

evident in their London counterpart, manifested through common interests in exploration and colonialism, there were variations in 'municipal imperialism' between them, including the much greater focus the RSGS placed on geographical education above exploration, which was the main concern of the RGS. The RSGS' more learned membership and the less imperial focus of its activities enabled its survival in the face of imperial atrophy: 'when the imperial propagandist purpose fell away, it (the RSGS) had the strength to survive as a significant intellectual body'.[23] The RSGS' success above other provincial societies can be attributed, in part, to its location in Edinburgh, which 'benefited from the presence of many progressive and innovative thinkers besides the university staff, who reinforced the city's vitality as an intellectual centre'.[24] These differences in the way geography was done between the main geographical societies—influenced in part by their location—were paralleled with further variations within the RSGS between the four local branches in Edinburgh, Glasgow, Dundee and Aberdeen.[25]

For my purposes here, geography's character and development in particular institutions can be gleaned in part from their activities in promoting geographical education. The GA had a close connection with both the RGS and the RSGS, although its part in geography's disciplinary progress has received less attention. The Association's aim was to promote the improvement of geography teaching in schools and to work alongside existing societies like the RGS and the RSGS on matters of geographical education. The GA and its journal were 'key elements in the success of the GA network . . . keeping school teachers up to date with new developments in pedagogy', and the GA's journal papers thus facilitate interpretation of geography's history from the 'grass roots up'.[26]

Another institution implicated in the shaping of geographical education was the BAAS. Withers, considering both the geography of science and the science of geography in the BAAS, elucidates variations in the conducting and nature of geography through the Association across time and space. Geography in the BAAS was both a local and imperial science, produced in Britain and in and for other parts

[23] Mackenzie (1995), 111.
[24] Lochhead (1981), 99.
[25] Withers (2001b), 203.
[26] Maddrell (1998), 149; Ploszajska (1999).

of the Empire.[27] The intellectual agendas of the BAAS influenced the popularity of geographical education among its members, which became a greater concern in Section E (Geography) in the early twentieth century than in the nineteenth century when exploration was the most prevalently discussed topic in sectional meetings and publications.

This thesis will reveal that the activities of the BA, GA, RGS, and RSGS in relation to geographical education were, at times, congruous and interconnected, but the type of geography promoted or the ways through which their members disseminated geographical knowledge varied significantly. It is therefore necessary to recall that there was no single institutional history applicable to geography's development as a discipline.

Geographers and the shaping of the discipline

The form geography took in any one institution was subject to individual agendas and distinctions over place and time. Geography had a local character and we, therefore, can not speak of British geography as though that label referred to a singular entity.[28] Rather, at different times, in different places and in the hands of certain individuals there were many different forms of geographical knowledge circulating in the British Isles. Geography is thus now understood to be not only a national discourse but a locally situated social practice.

The local nature of geography has been elucidated by considering the different expressions of geographical knowledge in the universities across the United Kingdom.[29] Most traditional historiographies of British geography postdate geography's presence in the universities to the era of disciplinary formalization and institutionalization in the late nineteenth century. There is a need, however, for a more 'historically sensitive conception' in order to reveal how geography was conceptualized in early modern British universities and to recognise more generally the different 'locational histories' of geography's university teaching.[30]

[27] Withers (2010).
[28] Livingstone (2003).
[29] Withers and Mayhew (2002).
[30] Withers and Mayhew (2002), 12.

Historians of geography have therefore given considerable attention to the efforts of certain individuals in the development of the discipline and in shaping distinctions in the nature of the subject. For some, individuals like Douglas Freshfield, John Scott Keltie and Halford Mackinder, all associated with the RGS and/or the GA, and all active in promoting geographical education, were the main individuals shaping geography's progress.[31] In conjunction with the establishment of geography departments at Oxford and Cambridge and later throughout Britain, key aspects of geography's progress included John Scott Keltie's 1885 report to the RGS on the state of geographical education in Britain, Europe and north America, and Halford Mackinder's 1887 paper on the scope and methods of geography.[32]

Keltie's 1885 report was a product of visits to seven European countries, engaging with teachers and academics in schools and universities, collecting examples of pupils' work, maps, models and atlases (later presented in an exhibition at the RGS in 1886), and corresponding with others in Canada and the USA. To scholars in the history of geography, the main sentiment of Keltie's report is clear: geography teaching in British schools and universities was far behind that in Europe and, specifically, Germany. Thus, 'except in our elementary schools, in the high school for girls and in isolated middle-class schools . . . geography in this country is almost entirely neglected as a subject of education'.[33]

Keltie was not the only individual addressing geography's position in education and promoting its utility as a science. Mackinder and Andrew J. Herbertson are two figures often highlighted as instrumental in geography's development, and the paths of these three persons often intersected. Keltie's Exhibition of Geographical Appliances at the RGS in London is thought to have consolidated Mackinder's interest in geography as a newly graduated Oxford student in natural science.[34] Mackinder's attention to geography culminated in his 1887 paper, which was a corollary of his recent lectures for the Oxford University Extension entitled "The New Geography".[35] Within a few months, Mackinder was

[31] Walford (2001).
[32] Johnston (2003); Livingstone (2003); Stoddart (1980); Withers and Mayhew (2002); Withers (2010).
[33] Walford (1996), 61.
[34] Walford (2001).
[35] Mackinder (1887).

established as the first official reader in geography at Oxford and a few years later, in collaboration with school teacher Bentham Dickinson, he was organising the founding of the GA in his office at Christ Church. Also facilitating Mackinder and Keltie's activities to develop geography's position in the schools and universities was Herbertson, another well-known geographer, who was initially Mackinder's assistant at Oxford, later replaced him as reader and, eventually, after Mackinder's death, as chair.[36]

The activities of, *inter alios*, these three men, promoting discussions of geographical education in societies and organisations, including the RGS, GA and the BAAS; encouraging universities to create separate geography departments; and suggesting secondary schools to employ at least one teacher who had training in geography, have led historians of geography to establish them, and perhaps rightly, as the 'heroes' of geography.[37] Less attention, however, has been given to their female counterparts, many of whom worked alongside Mackinder, Herbertson, Keltie and many of geography's other well-known male figures. In understanding the role of particular geographers in the shaping of the discipline we must be aware of the tendency to uncover the male histories, whether this is a corollary, as Livingstone puts it in the preface to *The geographical tradition*, of the more recorded masculine and male-centred narratives, or because female's stories and histories are hidden or unrecorded.[38] Maddrell explores the neglected role many female geographers played in shaping the discipline's character and progress in her book *Complex locations*.[39] To name but a few, Ellen Rickard was a long-term demonstrator on the influential summer vacation courses at Oxford, organised by Herbertson and his wife Frances Dorothea Herbertson who contributed greatly to Herbertson's school textbook series. Joan Reynolds, who also assisted the running of vacation courses at Oxford, was instrumental in the promotion of fieldwork in geography teaching. Marion Newbigin acted as editor to the RGS and contributed to environmentalist theories, and Margaret Shackleton completed a degree in geography and became established in University College London, working alongside economic geographer Lionel William Lyde.[40]

[36] Withers (2010).
[37] Livingstone (1993); Stoddart (1967, 1980); Walford (2001); Withers (2001a).
[38] Livingstone (1993), vii. See also Livingstone (1995).
[39] Maddrell (2009).
[40] Maddrell (2009), 126–132.

There were also many other individuals, both men and women, who receive less attention from historians of geography but who were influential in shaping the geography taught to pupils at certain instances, including many teachers who determined the nature of geography presented in their schools, and who will feature alongside well-known names in the following chapters. My purpose here is not to conduct a gendered study of geography's history but to show that geography's pedagogical and discursive characteristics, specifically in the schools, were connected to, not only imperial and institutional influences, but they were concomitantly shaped by particular individuals, some of which have received considerable attention by historians of geography and some of which have not.

Book history: technology, people, and space

Historians of geography, and historians of science, have recently drawn on book history in order, in the case of the history of geography, to provide a distinct and sometimes neglected textual focus to geography's disciplinary development and also, and increasingly so, among both historians of geography and historians of science, to elucidate the geographical sensibilities inherent in the production, movement and reception of scientific (including geographical) knowledge.

According to the focus of book historians to date, the history of the book can be roughly divided into these three topics: that is, production, dissemination and reception. The first is the topic of Lucien Febvre and Henry-Jean Martin's 1976 book *The coming of the book: the impact of printing, 1450-1800*, exploring the spread of print from Western Europe over three centuries. For Febvre and Martin, print was 'a force of change' in the Renaissance, Romantic and the modern era since it gave 'great thinkers' the ability to spread their knowledge more easily from person to person and place to place. This transmission, however, was subject to the local specificities influencing the nature of the printing process and the character of print: the style of printed book varied between countries across Europe and, on a smaller scale, between regions. The impact of print, although global, was locally specific, dependent upon new technologies; techniques; intellectual, social and economic circumstances; and the people involved in its spread.[41]

[41] Febvre and Martin (1976), 248, 10.

Febvre and Martin's interest in the global spread of print and its part in important cultural developments is echoed in Elizabeth Eisenstein's consideration of the impact of what she terms 'print culture' upon the main cultural and intellectual movements associated with the 'shift' from medieval to modern times.[42] Rather than Febvre and Martin's interpretation of the 'accumulative' effect of print, Eisenstein interprets the emergence of the printing press as a 'communication revolution' characterised by: an initial increase in the number of books made; new physical formats in books; new social relationships among diversely skilled workers engaged in printing; changes in the nature of reception, from memorisation of the spoken word to reading; and, central to Eisenstein's argument, a 'fixity' of the written word. Just as Febvre and Martin recognise the importance of the printed word in the spread of knowledge, so too Eisenstein heralds the standardisation of the written word as a method to transcend cultural and linguistic boundaries. At the same time, Eisenstein, disavows the regional, national and global variations recognised by Febvre and Martin. For Eisenstein, print's fixity was a necessary feature to facilitate societal and cultural transformation under, *inter alia*, the Renaissance and Christendom.[43]

For other book historians, 'print culture' does not exist outside of its location in the way Eisenstein claims: the nature of the book cannot be understood by looking only at the object (book) and the technology that gave rise to it at the global scale, but rather, according to Johns, 'the topography of print should be measured on a small scale, in feet and yards'.[44] Johns' study of book production, dissemination and reception is set in seventeenth century London and emphasises the importance of local cultures and differences within one site of production on the meaning of a text. He is concerned with the local geographies of the book, with the 'domains' of book production and reception i.e. the printing houses, bookshops, market places and coffeehouses. These local sites were distinct cultural and social settings and the people operating within them—crafting, trading and reading—influenced the knowledge produced and received in book form. This reveals the human side of print, denying the inherent fixity of print assumed by Eisenstein. Fixity was a perception that relied on conventions of trust, credibility and authorship, which were

[42] Eisenstein (1983).
[43] Eisenstein (1983); Febvre and Martin (1976).
[44] Johns (1998), 68.

in turn dependent on the particular local domain of book production in London and the perceived character of the people producing print within this single site. More important than 'print culture' was readers' belief in the 'fixity' of the knowledge contained in a book.[45]

An important point evident here is that books were the result of and were operational within human relationships and, connected to this, were subject to locally specific cultural standards of trust and credibility. Books were more than products of technological advances. Whilst Eisenstein postulates the global effects of print's fixity, Johns raises questions of how and why books took the form they did based on people and processes at the local scale.

The human side of print: book production and reception

What Johns sees as the human side of print is conceptualised by Darnton in his 'communications circuit', which demonstrates the conceptual movement of a book from author, publisher, printer, supplier, shipper, bookseller, binder and finally to reader—a circular movement between defined categories of people with, in Darnton's mind, specific roles (Fig.2.1).

[45] Johns (1998).

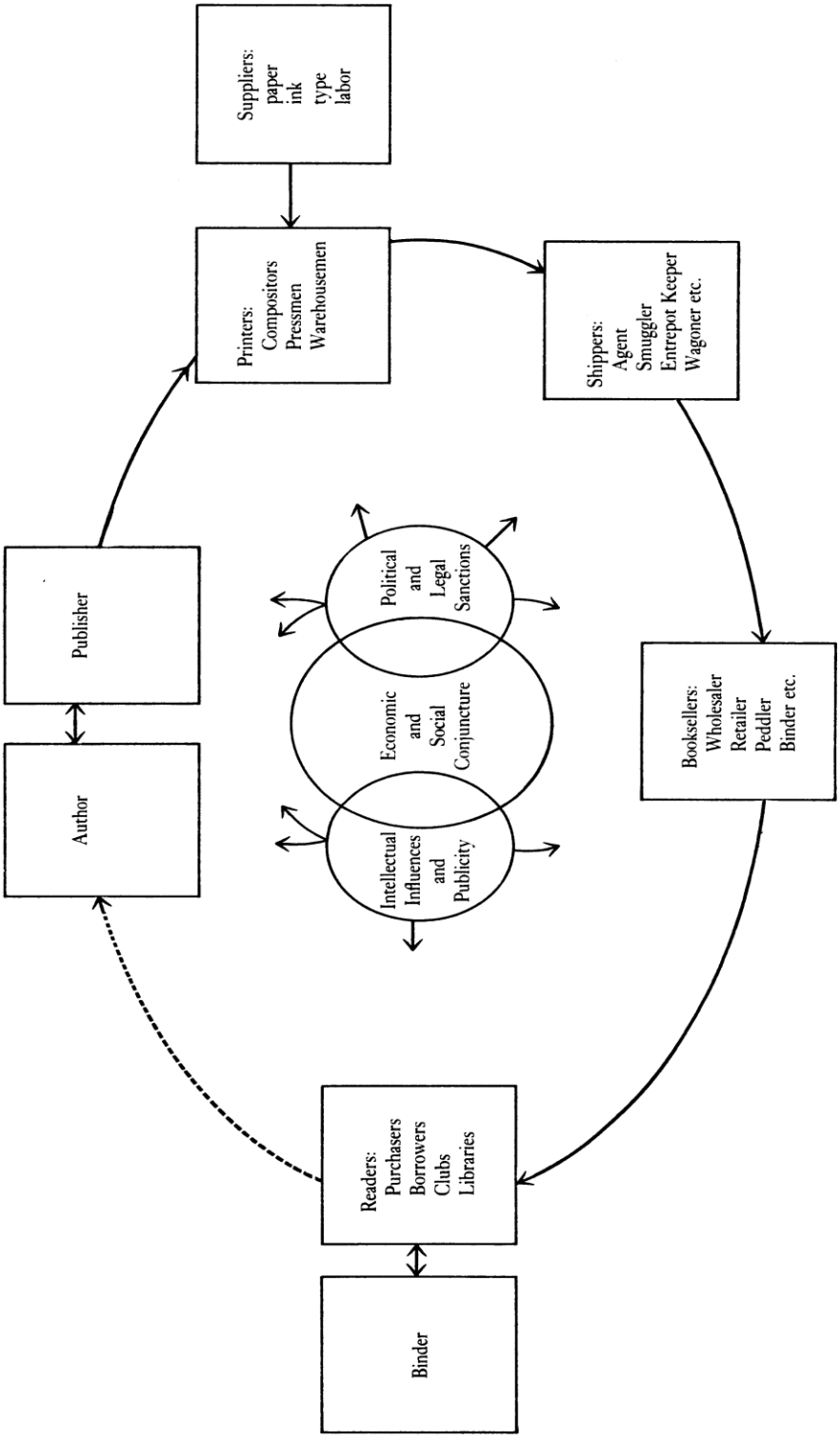

Figure 2.1. Darton's communications circuit. This demonstrates the people and practices of book production, dissemination and use and their interactions with external social, political, economic and intellectual influences (Darnton (1982), 68).

According to Darton's model, textual meaning is shaped not only by specific agents and processes but these are connected to 'other systems, economic, social, political, and cultural, in the surrounding environment'.[46] In its circular movement from production to published book, Darnton's circuit questions the role of the author by highlighting how the reader feeds back into this continuous cycle. This goes some way to reassert the reader as an important entity in shaping a book's meaning. According to this model, the way that the reader influences the text is through their role as 'implicit readers' and 'explicit reviewers': producers construct a text based on their own view of the interpretative abilities of the former and authors' subsequent productions are shaped by the criticisms of the latter.

Whilst Darnton's circuit is over simplistic—production is more likely to take the form of processes rather than one-way exchanges between hermetic categories—it identifies some of the people involved and it questions the role of both author and reader in the production process. This 'human presence' in book production was coined by McKenzie as 'the sociology of texts', revealing the attention McKenzie gives to the writers, printers, publishers and readers that shape a text's meaning.[47]

Discussions about the agency of the reader and/or the text in determining meaning mark a move in book history towards questioning the authority of the 'author'. There are many different prevailing interpretations of producers', readers' and texts' interactions in the production of knowledge. Some scholars, including Barthes, render the author 'dead'—no longer a realistic agent in book production. Jan-Dirk Muller takes a different approach to the problematic nature of 'author': he challenges the idea that the author no longer exists, promoting the book as the main protagonist in determining meaning: 'books are the teachers, not their authors. In them the author is present'. For Foucault, however, 'it is not enough to declare that we should do without the writer (the author) and study the work itself' since we need to consider, if not what is commonly designated the 'author', who or what is shaping the knowledge produced, in this way locating the 'space left empty by the author's disappearance'.[48] One aspect of this emphasis on who has replaced or supplemented the author, and which Darnton raises in part, is this greater recognition of readers.

[46] Darnton (1982), 11.
[47] McKenzie (1986).
[48] Barthes (2002); Muller (2002), 186; Foucault (2002) 282, 283; also see Foucault (1984).

This is evident in Fish's idea of 'interpretive communities', which according to Fish consist of people who share the same interpretive strategies existing 'prior to the act of reading and [which] therefore determine the shape of what is read'. In this way, Fish challenges both the authority of the author and the stability of the text. Far from giving all power to readers, however, Fish sees the reader as dependent and controlled by their interpretive community, as 'community property'.[49] The text, author, and reader in Fish's view are distinct entities and each a product of reading; a text's meaning is dependent on the specific interpretative structures readers invest in it. This privileging of readers' interpretive community reveals that historians of the book thus assign the reader, text and author various degrees of influence in the production of a text's meaning. As I consider in relation to school atlases, there is a need to illuminate the interaction between author-text-reader in the production and reception of knowledge.

A history and geography of reading

A less dichotomous relationship between reader and author is expressed by Iser who, rather than giving all interpretive power to either text or reader, ascribes textual meaning to the negotiations occurring in the gaps in understanding between the physical object (text) and the reader.[50] Reading is therefore a process of producing meaning through a dialectic between readers and books. A more mutual association between authors, readers and texts is also discussed by Geertz, who interprets textual meaning as the product of exchanges between all three. Alluding to Darnton's idea of 'implicit readers' and Fish's 'interpretive communities', Geertz indicates that texts are produced in light of producers' knowledge of readers' interpretive abilities and their understanding of the cultural system in which readers operate.[51]

This negotiation between text, author and reader necessitates attention not only to the 'sociology of texts'—the people influencing meaning—but also to how this is reflected in the very physical format texts take: 'the different physical forms of any text, and the intentions they serve, are relative to a specific time, place and

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[49] Fish (1980), 14; 312; 14.
[50] Iser (2002).
[51] Geertz (1983).

person', and this interjection of the text between the author's intentions and the reader's interpretation means that material form is 'clearly involved in the structure of the book's meaning'.[52] In this way, all 'signs' in texts have meaning. This directs attention back on the text since the materiality of texts, which is shaped by the different people producing and reading them, impacts their reading and interpretation.

Like McKenzie and McGann, Chartier explicates the importance of material from. He sees textual meaning originating from a nebulous association between the form of texts, their 'creators', and their expectant readers: textual meaning is shaped by 'the dialogue that exists between the propositions contained in the work (which are in part controlled by the author's intentions) and the readers' responses'.[53] The book always attempts to install an order, put in place by its producers; this order is neither determined by one individual, nor permanent, but always subject to the 'reader's liberty'.

It is evident that there is complexity and a lack of defined associations between author, reader and text in the construction of meaning. This challenges a complete disempowerment of the author and undermines, in part, the reduction of textual meaning to the reader alone. Rather, a specific text's meaning is a constant process of communication between readers, physical format and producers. This negotiation, however, as the centre of Darnton's circuit elucidates (see above), is also subject to external cultural, economic, political and intellectual circumstances, which indicates that a text's meaning is 'not the same in all places or all times or for all people'.[54] Just as the meaning of a text is not fixed but is subject to distinct interactions between producers' intended meaning; its material format; and readers' interpretation, so too a text's meaning is capable of change as it moves from one cultural, economic, political and intellectual milieu to another. This geographical sensibility of print—the intricate relationship between a text's meaning and its movement or translation across space—means that texts can be made to move from one place to another, from one culture to the next: a text produced in Europe is 'neither some transcendent phenomenon variously disguised in different cultures nor

[52] McKenzie (1986), 50; McGann (2002), 71.
[53] Chartier (1992), 27; viii.
[54] Darnton, (1982); Chartier (1992), viii.

a notion so thoroughly culture-bound as to be useless beyond Europe'.[55] This further complicates the fixity of knowledge in print form, revealing that the very mobility of texts, moving between places and cultures, is in fact facilitated not by their standardised form, as Eisenstein supposes, but by their ability to be translated and transformed and so differently read by people in distinct locations.[56]

Historians of science and historians of geography, building on these concepts in book history on reception and translation, have begun to address more clearly how, why, and at the hands of whom knowledge is differently read and interpreted in distinct locations. Secord, examining the reading of *Vestiges of the natural history of creation*, a philosophical and scientific work published anonymously by Robert Chambers in 1844, presents a reception history that is deeply sensitive to geography and to the people and circumstances by which *Vestiges*' meaning was changed and reconstituted. Using the term 'geographies of reading', he describes the book's diverse interpretation across the British Isles. Distinctions in *Vestiges'* reading (reception and reviewing) within and between London, Liverpool, Cambridge, Oxford and Edinburgh were connected to the social, political, economic and cultural character of each location: 'Victorian towns and cities were defined through the character of their literary life, which was in turn shaped by industrial structure, class, population size, and tradition'.[57] Reading was thus spatially distinctive: while in elite society in London *Vestiges* was discussed in polite company only in terms of its scientific content and the light it shed on such existential questions, in the commercial city of Liverpool the book raised religious questions among professional men who saw the text as a way to interpret the problems facing the working class—a subject deemed inappropriate by London socialites. Secord's social geography of reading reflects Johns' study of print in London but it also highlights the importance of studying knowledge production and reception beyond the local setting, considering local and national geographies of readership together.[58]

Vestige's authorial history and geography complicates Darnton's distinction between reviewers and readers and the text's anonymity reveals a fluidity between

[55] Geertz (1983), 12; Eisenstein (1983).
[56] Eisenstein (1983).
[57] Secord (2000), 156.
[58] Secord (2000); Johns (1998).

processes of authoring and reception (reading and reviewing). As long as authorship was anonymous Chambers was able to act covertly as a reviewer of his own work: 'he monitored the reception, experimenting with variations in the relation between author and reader'.[59] At the same time, readers left marks in the margins of copies, copied their own versions of *Vestiges* into note books and diaries, and some even wrote apologetic responses to critical reviews under the pretence that they were the author's own words.[60] Chambers' *Vestiges* is thus an important indication of the varied reception of a text over space and time; the techniques used to construct a particular function of authorship, in this case anonymity; and the lack of distinction between processes of authoring and reception, and reading and reviewing.

Vestiges was also subject to translation, its ideas about evolution and the transmutation of species were translated from English, in various editions, into German and Dutch.[61] Through its translation, *Vestiges* was simultaneously transmitted in meaning and form from one culture to another. This too questions Darnton's communication circuit by illuminating the role translators—absent from the circuit—played in reconstituting a text's meaning by moulding it, through its transformation, to fit their personal agendas. In the case of *Vestiges*, the knowledge content and material format of the text was tied up in translators' advocacy of the text's argument about species transformation. This also raises questions of authorship since, as Fish, Geertz and Chartier indicate, the authors' intentions were never fixed but were subject to interpretation and, in the case of *Vestiges*, transformation in form and content.[62]

Changes in argument in the Dutch and German editions of Vestiges were performed through the entangling of the original text with other oppositional natural history texts and by supplementing the text with prefaces and prefatory notes which clarified and reinforced the translator's—we could say now author's—agenda. The first translation into German and the Dutch translation both used the book to evoke

[59] Darnton (1982); Secord (2000), 372.
[60] Secord indicates that a student at the University of Edinburgh annotated Thomas Monck Mason's anti-Vestigian polemic *Creation by the immediate agency of God* (1845), pretending to be *Vestiges'* author Robert Chambers, highlighting the parts of *Vestiges* that contradicted the polemical review. The marginalia ended by calling Mason 'cowardly' and 'sneaky' and signing it 'R. Chambers' (Secord (2000), 381).
[61] Rupke (2000).
[62] Fish (1980); Geertz (1983); Chartier (1992).

beliefs in divine intervention in nature, the latter seeing *Vestiges* as a method in quelling the upheaval from the 1848 revolution and re-securing people's belief in King and God. In contrast, the third translation, again into German, saw the book as enflaming the revolutionary spirit that the Dutch version sought to excite.[63] In fact, none of the translations endorsed fully the book's initial message but each presented certain and sometimes antithetical claims about nature and its creation.

This geography of reading and translation—the how, why, and by whom knowledge is made to move within and between distinct sites—has also been addressed by historians of geography. In Bernhard Varenius's *Geographia Generalis* (1765) the 'polyvocality' of the text, while written initially by Varenius, was contributed to by four other individuals whose involvement in improvement, illustration and translation (from Latin to English), influenced the spatial format of the text.[64] The text's material form reflected this multiplicity of authorship, leading to particular features, including bracketed editorial notes adjacent to Varenius's original text, encompassing the correcting opinions of the new contributors.[65] The text, in form and meaning, like *Vestiges* in its Dutch and German forms, was transformed.

This reconstitution of ancient texts can also be applied to their interpretation by geographers today: attempting to conduct a 'pedigree', or lineage, from ancient geographical traditions to 'modern' geography, namely with the purpose of valorising a particular idea or approach, geographers have interpreted Strabo's and Ptolemy's texts, both popularly called 'Geographia', to fit their willed notions of what geography is, should be, and what it once was. For Mayhew, the 'historical violence' required to propel an idea/person/approach/text into a lineage that proceeds from ancient to 'modern' practice distorts the more complicated 'genealogies' of 'geography' and of ancient geographical approaches.[66] In the case of Strabo and Ptolemy, their texts become translated into an arena of traditions and ideas that they never fully embraced, neither in content nor in style. As in *Vestiges* and *Geographia Generalis*, changes to the interpretation and use of Strabo's and Ptolemy's texts are a

[63] Rupke (2000).
[64] Mayhew, (2007a).
[65] Mayhew, (2007a), 29
[66] Mayhew (2011), 31.

consequence of distinctions in context and individual agendas between the production of the original ancient texts and their appropriation today.

Translation between editions of the same text also operated on Isaac Newton's classical text, which was transformed at the hands of Sir William Whitla, the latter's cultural influences in post-partition Belfast shaping how the text was re-made, re-encountered and re-interpreted.[67] Although the text's language was the same, its meaning was now deeply embedded in its intended readers' particular political and cultural setting. The spatial nature of reception is reinforced by the fact that while Whitla's version was accepted, and even praised, in Belfast, it was interpreted as bizarre in the rest of Europe. The national and local distinctions to interpretations of Whitla's remaking of Newton's work, and the changes imbued onto this text and within the pages of Vestiges, *Geographia Generalis* and Ptolemy's and Strabo's texts, influenced by reviewers' and their reading histories, reveal that a text's meaning is always (re)defined within the boundaries of other texts; through readers' culturally embedded reviewing of texts; and in the particular situated cultural, political and social circumstances of its reading. Reading can thus be understood as 'located hermeneutics': 'the coming together of texts and readers is a creative hermeneutic event, one in which meaning is made and remade'.[68]

The material influence readers' and reviewers' interpretations, and other texts, can have on a text's subsequent meaning is also demonstrated in Keighren's reception geography of Semple's 1911 text *Influences of geographic environment*. Keighren's analysis of Semple's text, which propounded a determinist relationship between man and his environment (now referred to as 'environmental determinism'), relies largely on marginalia by vibrant readers expressing their opinion of Semple's arguments in the blank spaces of the text.[69] The meaning attached to readers' marginalia relates in some way to Iser's idea that textual meaning is created in the gap between the text/author and the reader since through marginalia readers engaged simultaneously in processes of reading, reviewing and authoring: 'the margin can be seen to represent the site at which the distinction between author and reader is

[67] Livingstone (2008), 28.
[68] Livingstone (2005), 395.
[69] Keighren (2010).

blurred and contested'.[70] Notes in the margins had a distinctly geographical character, reflecting the location of readers and varying between specific cities, regions and countries. For example, at the University of Edinburgh Semple's book was advocated by George Goudie Chisholm, who used it to help prove geography's status as a science against recent claims of its ambiguity. At the same time, the book's reception points to a temporal shift in meaning, having invoked considerable discussion among many in the early twentieth century it is considered today to be distinctly obsolete.

Important to my concern with material features in school atlases, the geography of reading for *Influences* was also bound up in the specific medium used to transmit its content to a viewing or 'hearing' public. Semple's use of public lectures marked a distinction in the authorial voice readers encountered. In readers' private residences, Semple assumed the role of abstract 'author'. In Semple's public lectures, on the other hand, she was physically present as 'author' and visual representation through slides reduced the 'geographical gap' between the audience's location at the RSGS in Edinburgh, for example, and the location of Semple's studies across the globe.[71] In both cases, whether through silent reading or lectures, the medium through which Semple's argument was transmitted shaped its interpretation by readers. The importance of the nature of knowledge communication in questions of authorship and credibility returns us to McKenzie's and McGann's emphasis on the importance of materiality in the making of meaning, which Keighren here confirms also shaped how texts were received.[72]

Map history and the spatial turn

Ideas in book history on a text's production, movement and reception have also influenced studies in map and atlas history. The late twentieth century marked a shift in the history of cartography from interpretations of maps as neutral, scientific images to their critical analysis as representations embedded in the political, economic and social discourses instrumental in their production and use. The main corollary of this methodological change has been what Mayhew has more recently

[70] Iser (2002); Keighren (2008), 43.
[71] Keighren (2008); see also Keighren (2010). Also see Finnegan (2011) for more on the relationship between reception and the sites and style (including volume and intonation) of scientific oratory.
[72] Keighren (2008); McKenzie (1986); McGann (1992).

called a 'denaturalisation of print': a move towards an alternative cultural and social reading of maps.[73] An important advocate of this approach to maps was J. B. Harley. In his 1989 paper 'Deconstructing the map', he presented what has become a mantra for many historians of the map and which reflects the poststructuralist influences on Harley's seminal work, namely Derrida's deconstructionism and Focault's attention to power-knowledge relations: 'deconstruction urges us to read between the lines of the map—"in the margins of the text"'; such thinking led Harley to see maps as images of power themselves, as 'agents of change in history'.[74]

The map's power was also illuminated, according to Harley, in the political and imperial agendas of its producers. Maps were socially and culturally constructed and influenced by what Harley called external (intentional) and internal (unintentional) silences, which he believed were incorporated into the map during its production. Intentional silences were strategic attempts by those commissioning and/or producing a map to distort, manipulate and censor cartographic knowledge for political or economic reasons.[75] An apotheosis of this external power is the ubiquitous Mercator map of the world, showing British imperial territory in pink and presenting decorative emblems in the margins. This map contained intentional silences since the iconography in the map and in its 'blank spaces' illuminated an Anglocentric and imperial perspective on the world that went unacknowledged in the printed map. Used in the specific historical and political context of the British Empire, such a map not only reflected desires for British superiority but it became, what Harley calls, 'a silent arbiter of power'.[76] The 'power' of the Mercator map, however, was predicated on unintentional silences: it depended on certain conventions of map production which conditioned the form the map took, namely the Eurocentric projection used. For Harley, both the political and the more inherent silences of maps made the knowledge presented appear neutral, rendering maps 'authorless' or devoid of human influence and in turn endowing them with objectivity.

[73] Mahew (2007a).
[74] Harley (1989a), 3; (1989b), 13; (1987), 5.
[75] Harley (1988).
[76] Harley (1989a), 13; Harley (1988).

In his quest to uncover the human 'voices' behind these secrecies in maps, Harley raised the question of map authorship. Just as there was a division between intentional and unintentional silences, there was also a distinction between an inner and outer voice. The inner voice of the mapmaker, like unintentional silences, followed the established rules and standards of mapping. The outer voice was that of the map patron, engendered by the same motivations which produced intentional silences in the map—reflecting the social and political agendas of the powerful. The map was a result of dialogue between mapmaker and patron: that is, the map reflected a negotiation between an inner and outer voice, manifest in maps through the exclusion or censorship of knowledge, through external and internal silences.[77]

Harley's discourses of 'silences' and 'power' have been interpreted and challenged differently by various map historians to date. Agreeing with Harley's interpretation of this interaction between mapmaker and patron, Wood considers that maps 'having been made by a mapmaker who bent his art and science to the will of a patron exercising his wealth and power . . . became vehicles for the exercise of that wealth and power'. In contrast, Belyea interprets the map as not a reflection of a hidden voice or subtext but rather she sees the power of the map as 'an impersonal, indistinguishable, unsubtractable aspect of [that] discourse . . . there can be no "mask" . . . no "hidden agendas" by which "human agents" exercise duplicity'.[78] This tension between postmodernist ideas that the map is by its very nature a dehumanised agent of power embedded within a particular society's structures—what Harley advocated in part—and the sociological approach suggesting that the map is a product of particular peoples' agendas—which Harley also advocated—brings attention to a criticism of Harley's work. For some, his desire to use 'a deconstructionist tactic to break the assumed link between reality and representation' contradicted his attempt to judge the 'silences' and 'power' of the map, which were judged according to Harley's assumption that the map could and should reflect a 'neutral reality'.[79]

Another aspect of Harley's analyses of maps, however, and which has received less attention, was the political, societal and human consequences of maps.

[77] Harley (2001).
[78] Wood (2002), 146; Belyea (1992), 3.
[79] Harely (1989a), 2; see Belyea (1992) for criticism of Harley's work.

This aspect of mapping and maps is apparent in British mapmaking in India, which sheds light on the political, social and economic motivations of this project and, at the same time, reveals the power of maps to administer and legitimise the consequences of Britain's supremacy in this location.[80] This approach to the sociology of maps enables a move from a focus on the content and form of imperial maps, which characterised much of Harley's most popular work, to elucidate the social hierarchy that facilitated the construction of cartographic and geographical knowledge about India. India's subjugation by the British was enabled by the combined use and effect of the instruments and technologies of surveying—what Harley had seen as instigating the internal silences and power in maps—and the social relations and structures facilitating these practices of rationalizing and ordering (and producing what Harley believed to be external power in maps).[81] Just as books were shaped by the circumstances of their production and use, so mapping and maps were both a reflection of and tools in imperial politics, society and culture.

In thinking about contextualising maps and map-making in this thesis, there is also something to be said about the actual geographies of map production in Britain. The two main centres of map-making in the UK were Edinburgh in the North and London in the South. This geography of mapping is in part connected to the geography of publishing in Britain more generally in the mid-late nineteenth and early twentieth centuries. There is an important question of why Edinburgh and London were the main centres of scientific communication, which I address only in part here. One of the obvious features of these cities was the existence and success of publishers and mapmakers. In addition, these professionals were operating in circles with leading scientists and newly established learned societies anxious to disseminate their particular discipline's assessments and knowledge about the world. Publishers' in London and Edinburgh had the advantage of, and they were successful in maintaining personal and business links in a variety of civic and cultural spheres. In addition, the intention of scientists to communicate specialist knowledge and the commercial, moral, educational and political impetus of publishers to provide knowledge for the masses was assisted by, and it explains in part the widespread adoption of mechanical printing in the mid- to late-nineteenth century.

[80] Edney (1997).
[81] Edney (1997); Harely (1988).

These cultural, intellectual and technological factors are very broad explanations for Edinburgh's central location in publishing circles. It opens the way for publishing histories of individual firms that consider the reasons for the success and decline of a specific firm's business ventures.[82] Some of the main publishers in London were Longmans, Green & Co., John Murray, and George Philip & Son, as well as Oxford based Oxford University Press, among many others. In Edinburgh, leading publishers included Archibald Constable, W. & R. Chambers, A. & C. Black, W. H. Lizars, William Blackwood, Thomas Nelson & Sons, Oliver & Boyd, W. & A. K. Johnston and, last but not least, John Bartholomew & Son. Glasgow was also home to the successful firms of Griffin & Co., and William Collins & Son.

The history of the Bartholomew firm is distinct in some ways from many of the other publishing firms in London and Edinburgh at the time, namely because of its focus on and recognized skill in map-making. As Johns has pointed out in relation to seventeenth century book publishing in London, the credibility of the printer and publisher of a book was an important aspect in determining its success.[83] This was also true in the case of map-making and atlas publishing in the nineteenth century and Bartholomew seems to have had the monopoly on credible map production. It is true that the Bartholomew firm was successful in Edinburgh because of the importance of the city in the circulation of scientific knowledge but, contemporaneously, Bartholomew's name brought business to this location and led British scientists to seek out the firm's expertise for any cartographic work. At the same time, Bartholomew was a facilitator of, and its business benefitted from, developments in geographical education at the time (see below).

Just as Fyfe has commented that Edinburgh's dominance of both the Scottish publishing trade and its learned world made it the centre of scientific publications in Scotland, so too Bartholomew was itself a centre of map-making in Edinburgh.[84] And whilst as the nineteenth century progressed Edinburgh publishers, according to Fyfe, lost trade to their London counterparts in relation to scientific publications, the same cannot be said of map- and atlas-making: Bartholomew, arguable over and

[82] For example, see Finkelstein's (2002) study of the house of Blackwood in the nineteenth century and Fife's (2012) interpretation of W. R. Chambers commercial enterprise.
[83] Johns (1998).
[84] Fyfe (2007).

above London mapmakers, became the go-to firm for the production of maps and atlases in Scotland, Britain and even in the British Empire as a whole, and it remained dominant in this arena until the mid-twentieth century. The reasons for Bartholomew's success will come to light in the succeeding chapters in relation to its school atlas publishing practices and the individuals who were engaged in these commercial and education ventures.

'Mapmakers are human'[85]

The same debate in book history about whom or what influences textual meaning pervades map history and the human presence in maps has long been acknowledged. In this vein, studies on the production and consumption of maps, such as Pedley's focus on the economic conditions and circumstances in which maps were produced and consumed in eighteenth century England and France, elucidate what McKenzie has called the 'sociology of texts', that is, the people involved in shaping map production and reception.[86] The individuals and relationships involved in map and atlas production and use, however, are generally examined in less detail by historians of cartography.

What Pedley does show, as Johns revealed in relation to book production in London, is that the map was a result of different practices carried out by people in certain local sites so that 'a single engraver's name on a map does not begin to reveal the number of workers who contributed to the finished product'.[87] We also see the idea of 'implicit readers', as in Darton's communications circuit, acknowledging the role of readers in the production process as producers constructed maps based, partly, on their perceptions of users' demands: mapmaking for Pedley involved 'a complex interplay of social, technological, and economic activities'.[88] At the same time, however, just as Fish places greater weight on readers' interpretive communities, and other book historians like Iser see the text as the main determinant in the making of meaning, Pedley presents producers' decisions over commerce as a major guiding

[85] Wright (1942), 527.
[86] Pedley (2005); McKenzie (1986).
[87] Pedley (2005), 45; Johns (1998).
[88] Darnton (1982); Pedley (2005), 198.

feature in the reception of a map: 'the effect of the printed map on the user is shaped by the choices and limitations imposed upon its maker by the resources available'.[89]

Whilst it remains apparent that some map historians, like some historians of the book, neglect to interrogate in full the interactions between producers, readers and texts in the production of knowledge, there is increased recognition of the map as a 'human practice': 'the real agents in mapmaking and in map using are us, the humans', which, vitally, questions the idea, put forward by Belyea and others, that maps are inherently powerful and are solely products of certain political contexts or economic constraints.[90]

Questions of atlas authorship: 'editor' or 'mapmaker'?

Recent studies in atlas history by both map historians and historians of geography elucidate a more in-depth engagement with the people involved in production and reading, and they illustrate why concepts in book history are useful in an analysis of the production and use of specific atlases. Such concerns in atlas history arise largely from attempts to understand the origin of the atlas idea and the role 'mapmakers' played in the shaping of atlas style and map content. In the light of this, map historians to date have focused on the early printed atlases, produced between 1600 and 1900. A broad definition of the atlas in such cases is often defined as more than a collection of maps: a book of maps 'structured according to some geographical scheme or purpose'.[91] These criteria of order and uniformity have led scholars to allocate the atlas's origin to Flemish mapmaker Abraham Ortelius' *Theatrum Orbis Terrarum* (1570).[92] This maxim among historians of cartography has been challenged more recently by Withers, revealing that an atlas is 'at once a book of maps and much more than a book of maps'. Ortelius's text marked the first atlas of uniform style and content but the atlas idea existed before this, evident in the bounding of maps for particular purposes and specific audiences in earlier periods.[93]

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[89] Fish (1980); Iser (2002); Pedley (2005), 198.
[90] Edney (1996), 188; Beylea (1992).
[91] Akerman (2005), 3.
[92] Ortelius is named as the producer of the first atlas in Akerman (1995) and Barclay (2004).
[93] An example of earlier interpretations of the atlas is Greek philosopher Ptolemy's (90–168 AD) *Geographia*, first printed in Italy, 1477. It included maps of a common format in association with explanatory text and thus took the nature of an atlas, establishing the idea of the atlas as a compilation of the world's vision of itself (Withers, 2008, 1).

The contested origin of the atlas idea is, concomitantly, a question of atlas authorship. Harley maintained that an atlas was the result of negotiations between a 'mapmaker' and his 'patron' but the role of the mapmaker as 'author' has been rendered problematic by others since the atlas originates with Ortelius because it is the first time the work of an 'editor'—or 'meta-cartographer'—is evident in the arrangement of maps.[94] Atlases are 'attributable to the various persons and professions which directed their compilation', including 'authors', 'cartographers', 'editors', 'publishers', 'engravers', and 'printers' who were involved, directly or indirectly, in the preparation of an atlas.[95]

This concern with what might be called the sociology of atlases demonstrates what Delano-Smith recognises to be map historians' recognition of the multitude of people involved in map production: 'it is obvious to map historians . . . that a "map maker" is rarely if ever a single person. Historians of cartography may use the term map maker in the singular as a kind of shorthand, but they do so knowing full well that it nearly always refers to a plurality'.[96] At the same, however, there is a tendency among map historians to shift the mapmaker's power from one 'individual'—the 'mapmaker'—to the 'editor' by describing the latter as the main agent in the ordering of maps and in the construction of what Wood has called an atlas 'narrative': in Akerman's opinion, 'a printed commitment to a particular composition and arrangement, then, invested the atlas editor with a measure of authority'.[97] There is yet limited engagement in map and atlas history with the role of the individuals ('authors', 'editors', 'publishers', 'engravers', and 'printers') to which Delano-Smith and others refer.

Crampton addresses the question of map and atlas authorship differently, drawing on the same tension evident in the work of Harley between postmodernist and sociological interpretations of maps. Highlighting the perpetual tension in map history between maps as products of their political, cultural and economic circumstances and maps as the result of individuals' endeavours, he asks: 'under

[94] Harley (1997); Akerman (2005), 3; Winearls (2005).
[95] Winearls (2005), xii.
[96] Delano-Smith (2002), 199.
[97] Wood's indicates that the arrangement of atlas maps in a sequence was the result of a carefully thought out scheme by the 'mapmaker'. Wood reveals a need to look closely at what narrative the atlas constructs: how, why and for whom? (Wood (1987), 30; Akerman (2005), 29).

what circumstance is a map authored? Are either the traditional maps-are-by-individuals or poststructuralist maps-are-cultural productions satisfactory accounts?'[98] An answer to this and one which examines in detail the different people, often taken to be implicit by historians of the map, involved in the production of atlases is Withers' reception history of Blaeu's 1654 *Atlas Novus*, which reinterprets Darnton's communications circuit (see above), challenging the exclusiveness of 'author', 'reader' and 'editor'. Withers applies a 'sociology of texts' by paying attention to the particular and numerous individuals involved in the atlas' making.[99] Over an extended period Darnton's category 'author' applied to Timothy Pont, William Camden, George Buchanan and Joan Blaeu, each individual conducting a variety of processes, including, *inter alia*, construction, reading, reviewing and editing. The categories 'author', 'mapmaker', 'editor' and 'publisher' are thus too restrictive to apply to a single person: there is much more to know about the people involved in atlas production in relation to who they were, what roles they played, and what their motivations were.

Perhaps the question therefore should not be whether a map is a product of certain individuals and/or contexts but instead what associations, interactions, and communication were involved in its production and use in certain political, cultural, economic and intellectual contexts. Examining maps from Greek antiquity to modern Europe in their economic and social contexts, Jacob reveals that 'maps cannot be conceived of apart from a process of human communication, a process that alone can justify the project of reducing the spatial environment to a model that is visible and intelligible at the same time'.[100] This corroborates the view that the book itself is a communicative process in different times and places and in order to fully understand the production, movement and use of maps we must recognise that 'all mapping is, in one way or another, a matter of individuals and of understanding the nature of the relationships between them'.[101]

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[98] Crampton (2001), 243.
[99] Withers (2005); McKenzie (1999), 13.
[100] Jacob (2006), 2.
[101] Secord (2000); see also Anderson (2009), for a study of eighteenth century military maps in Scotland in the light of the social, intellectual and practical networks which directed their production (and reception); Withers (2002a), 60.

British school atlases

The communicative nature of map production and use has received even less attention in relation to school atlases—a particular type of atlas influenced by, as well as shaping, geographical education in particular times and places. The study of school atlases to date has focused on the political and cultural circumstances of production, with little consideration of the people and processes involved.[102] Pastoureau presents a history of school atlases in the context of geographical education and revolution in France from the sixteenth to the eighteenth centuries, revealing that the production and development of French atlases interacted with the cultural, political and economic contexts in particular periods. The *National Portatif de la France destine a l'instruction publique* (*National portable of France for the instruction of the public*) was the first official French school atlas, published in the late eighteenth century, and its map content and style were linked to revolutionary ideas on what school geography should teach French pupils. This atlas defined its readership as 'the student who wishes to instruct himself in order to learn of the old and abusive France, as well as the new regenerated France, into the position of judging for himself what he feels is the best'.[103] Lehn's *Deutschlandbilder: historische schulatlanten zwischen 1871 und 1990* (*Images of Germany: historical school atlases published between 1871 and 1990*) examines German school atlases in five historical periods, including imperial Germany.[104] In this way, school atlases are reflections of the *zeitgeist* in specific national settings and historical periods.

British school atlases have been addressed, briefly, by Wise, who considers the main publishing houses and the key developments in geographical education.[105] Such studies of atlas history have yet to address the questions raised by those analysing general atlases concerning the particular people—their different backgrounds and their interactions—producing and using them. Wise's paper is a call to attention for future research on British school atlases and, although indirectly, this thesis is an attempt to answer and expand upon his queries.

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[102] Pastoureau (1997); Lehn (2008).
[103] Pastoureau (1997), 130.
[104] Lehn (2008).
[105] Wise (1997). British school atlases also feature in Donald C. Dahmann's (2011) recent book *Geography in America's schools, libraries, and homes,* which is a bibliography of geography books published in the United States between the eighteenth and early twentieth centuries. A detailed study of American school atlases, however, remains to be tackled.

Geographical publishing: style, content and intellectual developments

School atlases are a particular genre of atlas to be studied by historians of the map and, at the same time, are books for the attention of book historians. They are also a particular type of school text which requires contextualisation in both its intellectual and publishing traditions. Interaction between geography's disciplinary character and the nature of its texts is raised by Mayhew, examining British geographical textbooks in the period 1500–1900.[106] The affinity between geography's texts and the development of geography as a discipline advocates a 'materialist hermeneutics' approach to the study of texts, which sees printed format as a bearer of expressive meaning—what McGann sees as a process of materialising the meaning of texts in an attempt to understand their 'textuality', that is the 'sociohistorical particularities' within which they are produced and read. Geographical texts provide an illustration of what McGann sees as the 'complex (and open-ended) histories of textual change and variance', since their paratextual features—title pages, prefaces, dedications, notes, typeface, punctuation, and binding—responded to, and were influential in, geography's increasingly professional and disciplinary character.[107] Developments in geography's aims and scope, and progress in its position in the universities and schools, were consonant with changes to the style and layout of its texts.

The importance of studying geography's texts is also elucidated by the statement that 'text and context are inextricably intertwined in disciplinary history'.[108] To understand the contexts in which geography was produced, defined and practiced we must consider the texts in and through which the subject's scope and aims were negotiated. Equally, in order to grasp why geography's text took the form they did we must know the context of their production and use. Some attention has been given to this in relation to geography textbooks (and other apparatus like models and images) used in schools in the late nineteenth and early twentieth centuries.[109] By considering textbook authors' perceptions of the nature and function of geographical knowledge generally; the pedagogic approach employed in texts; and

[106] Mayhew (2007b)
[107] Mayhew (2007b); McGann (1991), 9. Paratext is a term Genette used in his examination of the meaning residing in the margins of the text, in the prefaces, dedications, notebooks, advertisements, and footnotes (Genette, 1997).
[108] Livingstone (1993), 29.
[109] Maddrell (1996; 1998); Ploszajska (1996; 1998; 1999).

the content of texts themselves, including illustrations, pupil exercises, and organisational structure, it is clear that geography textbooks—their pedagogical approach and structure—reflected prevailing views in a period marked by geography's institutionalisation in the universities and at a time defined as High Empire.[110] These textbooks are thus important in understanding geography's development because they were powerful media through which geographical knowledge was constructed for school children. At the same time, textbooks and other representations of Britain, Europe and the world beyond informed pupils' imaginings of specific places and people. Not only were these textbooks reflections of dominant political, cultural and economic contexts, but they also were 'relations of power' themselves, shaping the discursive principles through which pupils understood the world. School texts (including school atlases), therefore, 'can only be understood in the context of the broader educational, geographical and cultural discourses of which they were a part'.[111]

This contextualisation not only applies in the case of British geography and its texts but in her chronological review of the shaping of geographical imagination in America between 1880 and 1950, Schulten also addresses the connection between broader political, economic, cultural and intellectual developments and the nature of three traditions in geography's print cultures: these include school and academic geography; mass-market cartography; and the work of the National Geographic Society and its magazine the *National Geographic*. For example, after World One, connected to America's changing commitments abroad, there was a shift in the minds of Americans' from a popular acceptance of the Mercator projection, in which the North American continent and the American nation appeared dominant, to a desire for knowledge of 'other' and distinct parts of the world.[112] Like others have found in examining the history of geography's 'texts' in the UK, there were connections between national political imperatives in America and geography's professionalisation in universities and schools, which were influential both on mapmaking and use and on the making and reading of geography's texts. Like the discipline's character in the UK, 'geography throughout this period narrated a world

[110] Maddrell (1998), 83.
[111] Maddrell (1998), 82; Ploszajska (1999), 68.
[112] Schulten (2001).

filtered by political and economic imperatives, tailored to the character and intensity of the nation's commitments abroad'.[113]

Combined with this concern for material format and context, as I have already shown in this chapter, is what book historians' have highlighted as the importance of studying the people involved in a text's production and use.[114] In relation to geography's texts, many of the people raised by historians of geography as the main protagonists in the development of the subject (see above) were often the same 'professionals' involved in the production of geography's texts. These geographers demonstrate the connection between the production of geographical textbooks, the progress of school geography, and the subject's professionalization in the universities; in fact, many of these textbook writers had recently emerged from the newly established geography departments. Herbertson contributed many textbooks including *Our own islands* (1907)*, Lands beyond the channel* (1910)*, Distant lands* and *The nations of the modern world,* as well as a text providing guidance for geography teachers entitled *The teaching of history and geography* (1912). George Goudie Chisholm produced his seminal work *Handbook of commercial geography* (1889) (still issued today); Hugh Robert Mill wrote *Elementary commercial geography* (1888); and Lionel William Lyde contributed a number of geography school textbooks, including *Man and his markets* (1896).[115]

An explanation for the involvement of geographers in geography's textbook publishing was their imperial agendas; part of the same impetus historians of geography attribute to the establishing of geography in the universities. For example, Mackinder confirms this in 1911 when he states that one of the nation's greatest needs was 'to equip the young citizen . . . with a knowledge of the chief contrasts of the political and commercial world . . . seen in this gauge, geographical education simply was imperial pedagogy'.[116] Just as Empire was not the only factor leading to the formation of University geography departments, so such a driving force behind geographers' involvement in school texts must be considered in relation to individual geographers' agendas. We must acknowledge, as Maddrell and Livingstone do, that

[113] Schulten (2001), 13.
[114] Darton (1982); Johns (1998); Maddrell (1996); McKenzie (2002); Ploszajska (1999); Schulten (2001).
[115] Maddrell (1998), 96–97.
[116] Quoted in Livingstone (2003), 19.

geographers' part in the production of geography's texts was in many ways related to anxiety about consolidating their (and their subject's) position and status in the country's school and higher educational system.[117] School texts provided an appropriate medium to do this. At the same time, as Madrell notes, not all of the contributors were such well known university men: also involved in writing the *Oxford Geographies*, for instance, were geography teacher and lecturer John F. Unstead, geography teacher Eva G. R. Taylor, and explorer Thomas G. Taylor, who spent most of his University career in Australia.[118] There was thus an association not only between well known geographers in the universities and the production of school texts (including atlases) but this link must be extended to include the activities of geography teachers (and other professionals) who were shaping the nature of the subject in schools through their teaching and/or publications. The history of geography's texts, and my history of school atlas publishing presented here, thus encompasses textual analysis; a history of the discipline; and a detailed study of geography's protagonists in the universities, schools and in geographical (atlas) publishing.

Archival science in practice: the case of the Bartholomew Archive

To support an analysis of the people and processes involved in school atlas production, dissemination and reception, my empirical research is based heavily on materials from publishers' archives. This thesis is thus informed by, and adds to, concepts in archive history on the nature of archives and archival research. The archive of John Bartholomew and Son, upon which my thesis relies, provides an example of archives in practice. My research in the Bartholomew Archive facilitates an analysis of the circumstances of an archive's construction and preservation, and it provides an opportunity to be reflexive about my role in shaping its meaning.

Developments in thinking about archival science have been informed by Derrida's view of the archive as a 'topological site' and a 'nomological space': in this way the archive is, respectively, a physical site and a space of authority.[119] Perhaps most helpful for my engagement with archives is Derrida's view that the

[117] Livingstone (2003); Maddrell (1996).
[118] Maddrell (1998), 96.
[119] Derrida (1996).

archive is characterised by a conflict between the act of remembering and the act of forgetting; in Freudian terms, a tension between the 'conservative drive' and the 'death drive'. The very nature of archivisation means that we are unable to remember everything or reach the origin of events or things. What happens in and through the archive is thus a consequence not of a fixed history or memory but rather it is a result of the (re)production of knowledge in a particular time and place. The perpetual desire to reach the 'original' order of things is what Derrida calls 'archive fever', which is a 'diseased' and unattainable state that pervades the work of the historian.[120] The archive fulfils this desire only in as much as we are able to view how the past has been interpreted through the activities of archivists, within the structures of a specific society and culture in which the archive was constructed, and as part of the cultural and political contexts in which it is now being viewed and used.

One instance of the archive as, what Derrida interprets it to be, a literal site, shaped by particular temporal, spatial, social, political and cultural contexts, is evident in its production and use within colonial and imperial history. According to Cook, 'historical examples … suggest that there is nothing neutral, objective or "natural" about this process of remembering and forgetting'.[121] The archive is a privileged and physical site, a site where memory is often constructed in support of the metanarratives of the powerful and which has tangible consequences on the subjugated.[122] For Cook and Schwartz, the archive is embedded in power relations which serve the dominant authorities in society, the processes of remembering and forgetting thus privileging some and marginalizing others; this 'power' of the archive has been subverted in part by a postcolonial agenda to re-read and re-write the archive's 'tacit narratives'.[123]

The archive is described by Michel Foucault in more abstract terms than Derrida or Cook and Schwartz allow. For him, the archive is a discursive function, governing the form statements take: it 'is not that which … safeguards the event of the statement, and preserves, for future memories, its status as an escapee'.[124] What the archive does is house, in a particular time and place, the domain of institutions,

[120] Derrida (1996).
[121] Cook (2001), 9.
[122] Cook (2002).
[123] Cook and Schwartz (2002a), 1; also see Cook and Schwartz (2002b); Ketelaar (2001).
[124] Foucault (1989), 129.

economic processes and social relations through which knowledge about a particular society, culture and people can be articulated.

The power and effect of the archive in this way is raised by Richards in relation to imperial Britain in his analysis of the imagining of the Imperial Archive through particular popular novels.[125] This is similar to Said's approach to texts and imperial history in *Culture and imperialism,* in which he illustrates the relationship between culture and Empire according to its representation in English novels: just as Said sees these novels as cultural forms reflecting and influencing the formation of imperial attitudes, so Richards shows how the recording of Empire, the gathering of knowledge about empire, became tantamount to the exercise of British Colonial power.[126] The three novels Richards examines created a myth of a unified imperial archive, using knowledge to symbolically unite territories under British colonial rule. The imperial archive was a discursive formation determined by specific rules and legitimised by the view that knowledge was controllable and was the ultimate form of power. The imperial archive, the ostensibly ordered nature of vast parts of the globe, was myth before it became reality: the imperial archive was 'a fantasy of knowledge collected and united in the service of state and empire'.[127]

Like maps, however, archives are not inherently powerful, and in fact 'the archive can be a benign repository, a powerful interpretive apparatus, an epistemological frame on the world, and often is all of these at once'; we should therefore view the archive 'not as a direct expression of power but as the result of contingency, of the haphazard accumulation of 'stuff''.[128] There is a need to think of what Osborne terms the 'sociology of the archive': the people who engage with it and the nature of the knowledge contained in it and produced through it.[129] Osborne places the archive somewhere between the abstract function suggested by Foucault and the actualist notion given by Derrida, referring to it as 'a principle of credibility'. The archive could thus be thought of as a Latourian 'centre of calculation' which functions on the basis of its credibility. There are two types of credibility guaranteed in the archive. Knowledge produced through the archive is legitimised by the

[125] See Cook (2001), (2002); Cook and Schwartz (2002a), (2002b); Richards (1993).
[126] Richards (1993); Said (1994).
[127] Richards (1993), 6.
[128] Schein (2006), 91; Withers (2002b), 305.
[129] Osborne (1999), 54.

archive's guarantee of 'epistemological credibility'. That is, the archive is a physical site embedded in particular kinds of knowledge and styles of reasoning associated with archival discourse, which give credence to any statement made through the archive. The archive also generates, and depends on, ethical credibility, which is not dependent on a physical site but on the status accredited to the archive and a subsequent right to speak—'a certain kind of author-function'. Further justification for any statements promulgated from the archive can be found in the 'ordinariness' or quotidian nature of the archive, which allows claims about the past to be incorporated into the mundane everyday practices of society since they are often neither obscure nor alien to the culture in which they are disseminated.[130]

The credibility of the archive is, according to others, also intertwined with researchers' physical contact with archival materials, dust being a mark of credibility.[131] In addition, this role of the researcher—the processes of interacting with and interpreting collections, and (re)making knowledge in the archive—makes the archive a centre of interpretation: 'what goes on there is less likely to be calculation as such than a certain art of deposition, preservation and—for both the archivist and the historian, if more so the latter—interpretation'.[132] The archive has thus not only an 'author-function', legitimising statements about the past, but it is itself authored and everything it holds is shaped, presented, re-presented, symbolised, and so on according to archivists' and researchers' set purposes: the archive is 'a conscious articulation of others' memories—'unlocking' their archive—is always in formation, brought into being through our intervention'; in this way 'archives themselves are 'texts' to be interpreted'.[133] From this, we can postulate that the knowledge contained in any one archive is multifarious since archival materials are assembled and rearranged overtime and over space as they are found, interpreted and appropriated by different people and as they, conceptually or literally, move away from the site of the archive into personal notes, journal articles, and books.

[130] Osborne (1999), 54.
[131] Steedman (2001), 81.
[132] Osborne (1999), 52.
[133] Withers (2002b), 309; Lubar (1999), 21.

Using Archives in this thesis

The idea that archives are 'texts' produced, and re-produced, by distinct people, and whose contents are assigned different meanings accordingly, provides an important frame for my empirical research. My findings in this thesis are based on several archives, holding a variety of collections relating to atlas production and geographical publishing, each of which are in different degrees of fullness: in many cases their content is far from their earlier or initial state but, rather, they reflect the selective character of archival preservation, survival, and research. Since school atlases form the central part my thesis I draw on a number of collections of these texts throughout the UK, mainly those held at the NLS, British Library (BL), and Bodleian. The aim of my thesis was never a complete record of British school atlases or their production, and the incomplete extant collections and my own partial selection of school atlases make this an unrealistic and unhelpful aim.

What my thesis is concerned with are the people, institutions and processes which shaped the production, movement and use of school atlases in the late nineteenth and early twentieth centuries. My focus was those atlases that were constructed specifically for geography pupils in elementary and secondary schools. My findings brought me to those atlases we know were used in public or state schools. Yet, their use in independent or public schools is probable, but difficult to determine and not the purpose of this thesis. My aim was to understand why and for whom atlases were made as they were. I define school atlases as atlases which made reference to school or classroom use specifically; to students; and/or to teaching in their title or in other 'paratextual' features (prefaces, introductions and so on), or in correspondence or editorial notes between atlas producers.

To move beyond a textual analysis and to encompass a study of the people and practices involved in atlas production, I also rely in this thesis on publishing and mapmaking archives. Table 2.1 presents the collections of this kind examined, indicating briefly the nature of their content and the extent of relevant material they contain. For instance, the publishing archive of Thomas Nelson & Sons consists of an extensive collection of letter books. My research on these uncovers the business and personal communication between Bartholomew and Nelson during their collaboration in the production of school atlases (and other works). Records of these

interactions provide essential detail for my analysis of specific school atlases and the sociology of their production in the following empirical chapters. The un-catalogued George Philip Archive, however, is of less significance despite Philips' prolific atlas production since the firm's business records from the nineteenth and early twentieth centuries are unfortunately no longer extant. Like Nelson and Philip, the Oxford University Press (OUP) was a major publisher of school atlases but its cartographic and editorial files in my period of interest are limited. A similar story can be told of the archives of publishers Macmillan & Co. and W. & A. K. Johnston.

My research in publishers' archives is supplemented greatly by the existing material which records the activities of certain geographical bodies, namely the RGS, RSGS and the GA. The records of the RGS, for instance, provide insight into particular developments affecting geography's teaching in universities and schools and the reactions of particular members or correspondents to these. Less substantial records exist for the activities of the RSGS, but RSGS council minute books provide a glimpse of school geography's progress in Scotland at the time. In this light, more fruitful was the collection of the GA at Sheffield City Record Office (SCRO), which holds important contextual material for my examination of geographical publishing, highlighting associations between members of this organisation, the RGS, the RSGS and the BAAS in the moulding of geography's disciplinary status in the universities and schools.

Table 2.2. Principal sources for my empirical research

Collection	Type of Archive	Location	Summary of contents viewed
Bartholomew & Son	Publisher's	National Library of Scotland (NLS), Edinburgh, Acc.10222.	Business records including incoming and outgoing correspondence; production ledgers; map and atlas proofs; printing record; and published atlas copies.
George Philip and Son	Publisher's	RGS-IBG, London, uncatalogued.	Philip's trade catalogues advertising school atlases and other educational works. Absence of business records for Philips' productions between 1880 and 1930.
Macmillan and Co.	Publisher's	British Library, London, Add. 55218.	Letter books covering ninetieth and twentieth centuries but provides limited details about the firm's activities in the school atlas market.
Oxford University Press (OUP)	Publisher's	OUP, Oxford.	Limited records of OUP's school atlas production in the period 1870–1930.
Thomas Nelson and Sons	Publisher's	Centre for Research Collections (CRC), University of Edinburgh, GB 237 Coll-25.	Letters between Bartholomew and Nelson about school atlases and other works.

W & A. K. Johnston	Publisher's	NLS, Acc.5811.	Family papers, including letters, photographs, press cuttings, essays and miscellaneous; and a small amount of business records. Limited information on Johnston's school atlas production.
Geographical Association (GA)	Geographical institution's	Sheffield City Record Office, 1988/60.	Letters, Council and committee minutes, and miscellaneous. This small collection provided great insight into associations between the GA, RGS and BAAS on matters of school geographical education and in the provision of school apparatus (including atlases).
Royal Geographical Society with the Institute of British Geographers (RSGS-IBG)	Geographical institution's	RGS-IBG, London.	Illuminating correspondence and council and committee minutes covering the period 1870–1930.
Royal Scottish Geographical Society (RSGS)	Geographical institution's	RSGS, Perth, Scotland	Council minutes, 1880–1930, shedding some light on the RSGS' involvement in geography's progress in

			schools.
British Association for the Advancement of Science (BAAS)	Geographical institution's	Bodleian, Oxford, Dept. BAAS 333.	Section E (Geography) special committee minutes. This collection has been excavated for its importance in understanding the production, circulation and reception of knowledge by Withers (2010).
School Board for London (SBL)	Educational body's	London Metropolitan Archives, SBL 188.	Committee minute books.

The partiality of some publishers' archives is negated in part by the richness of the Bartholomew Archive, which holds the business and personal records of Edinburgh mapmaker and publisher John Bartholomew & Son, most active between 1880 and 1987 (Table 2.1). A corollary of the abundance of materials in the Archive is the attention this thesis gives to Bartholomew's school atlas production. The firm's archival collections used most extensively in this thesis include proof maps and editorial notes on atlas drafts, which provide insight into the iterative nature of the atlas production process by illustrating the degree of affinity between manuscript and print and indicating stages of decision making over atlas style and content; correspondence between producers, shedding more and, often, most light on the communicative nature of atlas production; and day books (DB), invoice books (IB), and the printing record (PR), which provide information on the nature of production, including customers, cost, production duration, corrections, and reproduction.

The value publishers' archives have in an analysis of atlas and, more generally, book publishing, and yet, concomitantly, the partiality or limitations of publishers' archives is illuminated by the Bartholomew firm's DB and IB for the late nineteenth and early twentieth centuries. The DB indicate in chronological order the firm's daily map and atlas productions by job number, customer name, title of work

and number of copies made (Fig. 2.2). After 1895, the DB are supplemented by IB, which are indicators of the orders received by Bartholomew, and like the DB they present customer name and the number of works made and dispatched (Fig. 2.3). For the purpose of my thesis, the DB and IB elucidate the volume of school atlases produced in the late nineteenth and early twentieth centuries and the range and type of customers, namely educational publishers, commissioning these works.

The DB and IB, however, are the most complete from 1880, making difficult to analyse atlas production before this date. Additionally, poor data availability after *c*.1923, due to missing IB and a shift in the detail recorded in DB, mean that a more complete analysis is possible only for 1880–*c*.1920. The production history of school atlases, based on Bartholomew's record, is thus partial. The effects of these inconsistencies, however, are mitigated in part by the extensive PR in the Bartholomew Archive. This details the items, including atlases and maps, printed by the Bartholomew firm on a daily basis. Whilst like the DB and IB the PR records the number of atlases and maps made, the PR is also a record of the re-printing of works. It lets us see the print runs of individual items from which we may make inferences concerning the popularity of specific atlases, and which can be combined with published reviews of these texts in order to understand why some were more popular than others (Fig. 2.4, also see chapter 7).

The diachronic view of the nature, chronology and range of school atlas production provided by the DB, IB and PR is combined in this thesis with supplementary collections in the Bartholomew Archive and with other publishers' materials (both indicated above). Together these provide a prosopographical perspective by elucidating the people and communication upon which these production processes and trends depended. A contextual and textual analysis is also facilitated by combining these analyses with the records of geographical institutions and, importantly, by positioning my findings in relation to the style and content of specific atlases. In summary, through the archive collections available this thesis approaches the history of school atlases from three interconnected angles: it is at once a publishing history of a certain type of geographical text; a production history of one firm's school atlases; and a historical geography of school geography.

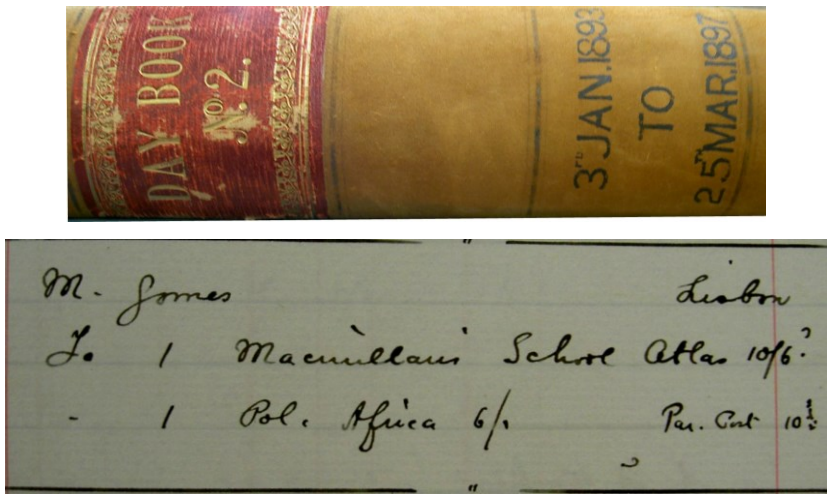


Figure 2.2. **Day book and entry**. This shows an order from 'M. Gornes', Lisbon for one 'Macmillan school atlas' (Source: NLS, Business Record 301, Day Book, 20 October 1893).

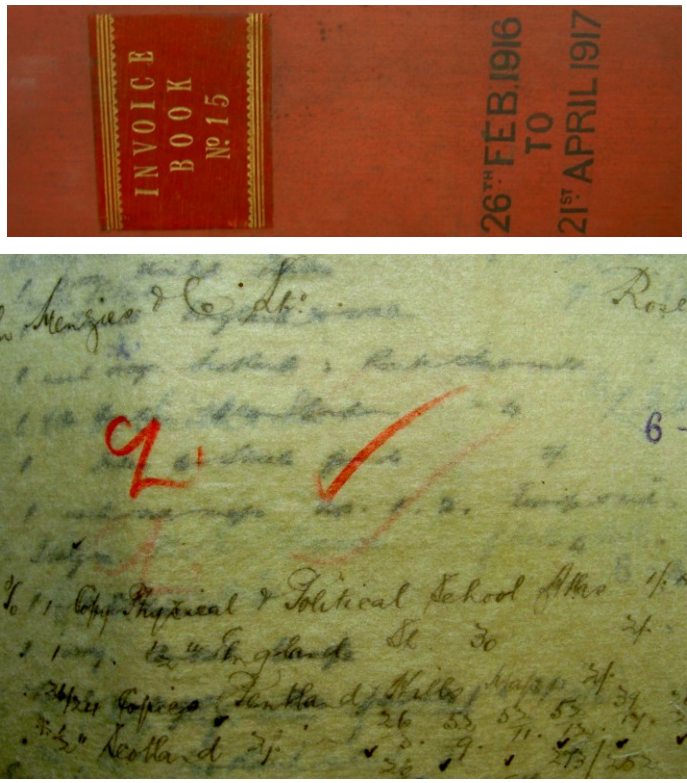


Figure 2.3. Invoice book and entry. John Menzies & Co was invoiced for one copy of the *Physical and political school atlas* in 1916 (Source: NLS, Acc.10222, Business Record 646, Invoice Book, 14 August 1916).

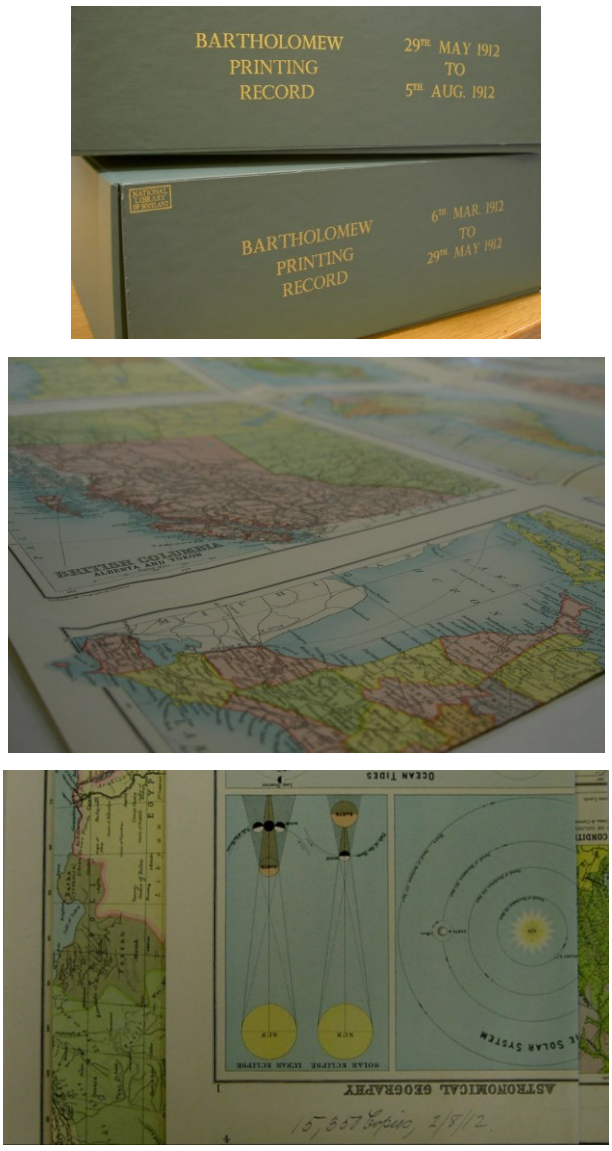


Figure 2.4. Printing record. The printing of the *Atlas for Canadian schools* can be traced through the PR: 15,350 copies were printed on 2 August 1912 (Source: NLS, Acc. 10222, PR, 50b, 29 May–5 August 1912, introductory letterpress, map and index for the *Atlas for Canadian schools*, 2 August 1912).

The importance of the Bartholomew Archive in my interpretation of the publishing history of school atlases stems from its rich and extensive content. There is also something to be said about how this resource illuminates the Bartholomew family and its pivotal role in the communication of geographical knowledge in the late nineteenth and early twentieth centuries. The position of the firm in Edinburgh and the part it played in making this city one of the centres of geographical enquiry

and scientific knowledge production has already been mentioned. I turn now to briefly acknowledge the personal and business activities of one Bartholomew member, John George Bartholomew (1860–1920), and his attempt to respond to what he saw to be the necessity of maps in geographical education for the masses and the influence of his personal struggle with faith and illness—factors which pervade the succeeding chapters.

John George's turn as manager of the Bartholomew firm began after his father's retirement in 1888 when John George was 28 years old. He is remembered for the great advance the firm made during his early years as head, including the planning and construction of the firm's final and bespoke premises on Duncan Street and the production of popular atlases such as the *Times Atlas of the World* (1920) and the *Physical Atlas* (1899), the latter published by Scottish publisher Archibald Constable and edited by well known geographical figures, A. J. Herbertson and Alexander Buchan. In fact, Bartholomew's map-making activities were embedded in his relations with the broader geographical community. He was involved in some of the main developments in geography's history, including being a founding member of the RSGS in 1884, of which he was honorary secretary until his death in 1920. As he himself expressed in 1885, the motivation for a society that would promote 'geographical work and study' was the belief that geography was 'one of the most important branches of knowledge to a commercial and scientific people'.[134]

In 1902, a less successful attempt to promote geography was Bartholomew's paper on the establishment of a National Institute of Geography. Bartholomew, in this paper, attempts to propel Patrick Geddes' ongoing campaign for such an institute towards the attention of fellow geographers and into the grasp of a 'wealthy patron' or 'university', which he suggests could realize this intention. The idea, for both Bartholomew and Geddes, was that the National Institute of Geography would 'act as a centre of instruction for the merchant, the politician, the student' and would become 'a temple of geography'. [135] This was based on the belief that geography was central to Britain's continued success in commerce across the Empire and, subsequently, across the globe. It was also implicated in Geddes' attempt to promote his own philosophy on the interaction between place, people, work which was

[134] Bartholomew (1885), 47.
[135] Bartholomew (1902), 146.

demonstrated in his Outlook Tower that would in fact, according to the plans displayed by Bartholomew, be a feature in the Institute.

Whilst John George's enthusiasm for Geddes' plans for the Institute failed to incite any wealthy supporters to finance the project, his vigour in promoting geographical education led him to assist in securing geography's position in Scottish universities. In the Universities of Oxford and Cambridge, geography's status had risen to an established scientific subject with its own department in 1887 and 1888, respectively. The first British hair in geography was at University College, London in 1903, when Lionel William Lyde took up the Chair in Economic Geography. In Scotland, geography's official recognition as an independent university subject came sometime later than for its English counterparts. Geography became an independent subject at the University of Aberdeen in 1919 but at the University of Edinburgh, where geographical study was taught in some form since the late sixteenth century, a chair in geography was not established until 1908 when George Goudie Chisholm was appointed and proceeded to effectively establish the geography department.

What is significant here is that geography's establishment as an independent subject at Edinburgh was particularly helped by John George Bartholomew and the support he engendered from the wider geographical community. In *c.*1905, Bartholomew disseminated a circular on the decision made under the aegis of the RGS and the University of Edinburgh to establish a Chair of geography at Edinburgh.[136] Bartholomew was the main protagonist in instigating this move and his motivation was similar to the ethos which underlay the formation of the RGS, namely to ensure the British population were sufficiently educated in geography (from schools to universities) in order to allow the continued success of imperial commerce and politics. Thus, in the circular Bartholomew reflected on the fact that:

> As yet there is no special teaching of geography in any Scottish University. The efficient teaching of geography in our schools and colleges is one of the most urgent needs of our time, affecting the political and commercial welfare of the empire, and it is believed that the subject cannot be satisfactorily dealt

[136] NLS, Acc.10222, Business Record 924, Incoming correspondence, Circular on the Chair of Geography at the University of Edinburgh, *c.*1902.

> with until our universities take it up and provide, in the first place, adequate training for teachers.[137]

Interestingly, for Bartholomew, geography's effective teaching in schools relied on its establishment in the universities.

His argument was given momentum by the inclusion in the circular of the names of a committee of geographers and other professionals who would make the decision on who to appoint to Chair (which we know was in the end Chisholm). These individuals comprised of geographers James Geikie and Clements Markham; Edinburgh University's president William Turner; and various men of commerce who, presumably, agreed to finance a part the (minimum) sum of £15,000 necessary to establish a chair in geography. The remainder of the money was to be donated by 'the people of Scotland'—the main purpose of this circular to raise awareness of the great need for this support.[138] As we know, the position was filled by Chisholm, who greatly shaped the nature of commercial and economic geography.

It was surely Bartholomew's central part in these developments within the geographical community in Edinburgh which encouraged RSGS Council members in 1905 when they decided to appoint John George to the honorary position of 'Geographer Royal for Scotland'.[139] Those supporting this decision included, *inter alios*, colonialist Harry H. Johnston, geologist James Geikie, publisher John Murray, and educationalist John Scott Keltie. Their desire was that Bartholomew might 'receive some recognition of his services, as well as of his efforts in the general promotion of geographical science and his contributions to British cartography'.[140] It was along the same lines that Bartholomew received in 1909 an honour from the University of Edinburgh for his work in cartography and his efforts in geographical education. To the English publisher George Philip, writing a congratulatory letter to Bartholomew in 1909, there was little surprise in this acknowledgement since in his view Bartholomew had 'done far more than anyone else in Great Britain to improve

[137] NLS, Acc.10222, Business Record 924, Incoming correspondence, Circular on the Chair of Geography at the University of Edinburgh, *c*.1902.
[138] NLS, Acc.10222, Business Record 924, Incoming correspondence, Circular on the Chair of Geography at the University of Edinburgh, *c*.1902.
[139] NLS, Acc.10222, Business Record 924, Incoming correspondence, Circular on Bartholomew's appointment as Geography Royal for Scotland, 8 December 1905.
[140] NLS, Acc.10222, Business Record 924, Incoming correspondence, Circular on Bartholomew's appointment as Geography Royal for Scotland, 8 December 1905.

the standard of cartography and to popularise the use of maps . . . indeed I wonder it has not been conferred upon you long before this'.[141]

Throughout the succeeding chapters it will become evident that John George's business ventures were bound up in his personal agendas, namely to promote the use of maps and, contemporaneously, to expand the general population's knowledge of geography. As well his great concern with geographical education and its role in allowing Empire to continue as a successful enterprise—an agenda which went easily with a successful map-making business—John George's personal struggle with faith and illness were aspects also pervading his business decisions, and perhaps ones less obviously beneficial in a commercial enterprise. We find evidence of his faith in God in his 'Book of inspirational statements'. Here Bartholomew described 'civilisation' as 'the act of getting the best out of life' and defined happiness as 'an attitude of mind'.[142] Bartholomew was a man whose financial activities were weighed against his faith in God and the moral responsibilities that this necessitated. For him, the firm and his faith went hand-in-hand and in this same book he referred to how one's trade or profession could be redeemed by God, to become a blessed thing.

Added to his faith was John George's long term struggle with tuberculosis, which he contracted in his early twenties. This too affected his business and meant long periods of rest and exclusion from the firm's operations at the demand of his doctor. Perhaps it was his debilitating illness that led him to express his struggle between God's goodness, a term he used in his personal writing, and the dark evils of suffering: a hand drawn diagram by Bartholomew presents 'the Human Heart in relation to the Divine'. This is a chart displayed on the background of sky, with lighter blue at the top where there is written 'glorious radiance of heavenly light' but from there the sky becomes darker blue-to-black until the bottom of the chart, which is labelled the 'dark focus and mists of evil'.[143] It would be misleading to suggest that the Bartholomew firm was always motivated by benevolent agendas without

[141] NLS, Acc.10222, Business Record 926, Incoming Correspondence, George Philip to John George Bartholomew, 11 February 1909.
[142] NLS, Acc.10222, Personal Papers 39, Book of Inspirational Statements, undated.
[143] NLS, Acc.10222, Personal Papers 41, Sketch of a spiritual communications chart.

thought of profit but the point here is that John George's geographical, educational, religious, and commercial agendas were evidently connected.[144]

The Bartholomew Archive provides a record of John George's activities in map-making and geographical instruction. It allows us to understand more fully the interconnection between map-making and geographical communities. At the same time, it reveals the motivations (both personal and business) which underlay the production and publishing of the firm's works. In the case of this thesis, it elucidates the individuals, including John George, who were negotiating commercial, educational, and personal decisions that were inevitably implicated in school atlas production.

As the most expansive source in my thesis, the Bartholomew Archive provides an instance of archival construction and use in practice and illustrates the changing meaning of archival materials over time and space. The purpose of the materials now housed in the Bartholomew Archive in the National Library of Scotland (NLS), Edinburgh is distinct from their initial role: preserved as part of the Bartholomew firm's mapmaking activities in order to record details of business (map and atlas) transactions and associations, the collections of the firm were products of, and media in, the production of geographical knowledge in a particular local site, categorised and selectively preserved by the firm's workers. In this way, we can think of the Bartholomew Archive as a 'centre of interpretation' in the sense that it is a record of the firm as a hub of map and atlas production for customers throughout the Empire. The Archive is also 'an item of interpretation' in the way that it is itself shaped by the individuals involved in its production and reconstruction and by their distinct purposes and motivations.[145]

The acquisition of the Bartholomew firm's records by the NLS began in *c.*1983 and continues to the present day through small personal donations by the Bartholomew family. This perpetual and sometimes ad hoc accumulation of information, or in Latourian terms a 'cycle of accumulation', demonstrates that archives can never constitute a complete record of the past.[146] Even under the firm's

[144] See Fyfe (2004) for a study of the Religious Tract Society in the nineteenth century and the negotiation of agendas of philanthropy and commerce.
[145] Latour (1987); Osborne (1999).
[146] Latour (1987).

initial activities, materials relating to map production were continually collected, whilst others were 'forgotten'. Now the archivists at the NLS are recurrently selecting, preserving and cataloguing the firm's collections according to standardised archival practices. The lack of fixity of the Archive means that there is no original order that existed during the firm's activities or that can exist again under the NLS.

The archive is further negotiated by researchers, including myself, interested in some aspect of the Bartholomew firm and/or some part of map production. Researchers themselves adapt, alter and add to materials through their construction of knowledge in and through the Archive. 'Researchers create and carry with them a 'body' of knowledge as a personal archive' that influences their own interaction with, and interpretation of, archival materials—in the same way that a previously read book influences the reception of subsequent books.[147] The archive changes its meaning according to the purpose for which it is used and by whom it used. As a historical geographer in the Bartholomew Archive, I have a part in this reconstituting of knowledge. The Bartholomew Archive enables me, as a researcher, to make statements about school atlas production, movement and use because I can access it and thus interrogate its content. The responsibility attached to the assumption that knowledge produced in and through the archive is credible is an important element of archival research which requires acknowledgement. The functions and principles of archives are situated in particular political, economic and cultural contexts but the 'power' of archives (the role they have in society) depends on people maintaining and using them and upon related processes of accumulation, calculation and interpretation.

My selection of materials and the statements I make are connected to the initial selection activities of the firm; the technologies of the Archive—the practices of archivists and the way materials have been re-ordered; and my own personal archive and motivations. In the light of this, when researching the Bartholomew Archive and other publishing and school atlas collections, I attempt to situate my findings in the multiple contextual frameworks in which these materials were

[147] Withers (2002b), 305; Livingstone (2005) speaks of 'textual hybridity', expressing readers' prevalent investment in other texts and the impact these texts have on one another. We can think of our interactions with archives in the same way: we come with preconceptions about collections and with agendas we want to fulfil, as well as manifesting previously acquired knowledge in our selecting, collating and interpreting activities.

embedded. The Bartholomew Archive's early formation as a business record for the Bartholomew firm informs its function today as a record of maps and mapmaking. Archives are both literal sites of interpretation, where knowledge is obtained; and discursive principles which influence the nature of the knowledge produced and disseminated—both of which enable me as a researcher to understand and at the same time make statements about the past. Just as the nature of the archive will shape my findings and statements, my part in particular archives' narratives is influential on their subsequent meaning. By acknowledging this I can more fully understand the character of the archive, as well as what it tells us about the processes and people involved in the production, movement and reception of geographical knowledge and, specifically, school atlases.

Conclusion

Book history adds to archive history an acknowledgement of the different people involved in the production and re-production of archives. This chapter has shown that book history also contributes to the spatial and human turn in the history of geography and map history, respectively, by facilitating a concern with the variation of textual meaning over space and with the individuals involved in book and map production and reception, and what their background and motivations were.

My analysis of school atlases in the late nineteenth and early twentieth centuries therefore takes a combined approach, encompassing a study of the intellectual, political, cultural and economic contexts in which they were made and used; the institutions involved; the individuals through which negotiations over style and content were conducted; the audiences for which atlases were produced; and the material format and content of the texts themselves. These five foci are influenced by what scholars in the history of geography, book history and map history to date have elucidated about the nature of geography's development as a discipline, the importance of institutions and people in the production of knowledge, and what texts reveal about broader contextual influences and about the people making and using them.

Combined, historical geography, book history, map history and archive history provide a framework for my study of school atlases, raising themes which inform the focus of my chapters in the thesis. Questions of authorship among book

historians have led to a replacing of the single, all-powerful author with the idea of the greater agency of the text and/or reader. In an analysis of the role writers, publishers, editors, mapmakers, booksellers, translators and readers played in the production of a single text, it is necessary to interrogate production and reception in relation to individuals' roles and their impact on the printed text—what I plan to do in this thesis. Rather than simply looking at the negotiations between 'author', 'reader' and 'text' as distinct entities, as book historians have traditionally done, there is a need—indicated in the work of historians of geography and historians of science—to examine in detail the interactions between individual geographers, mapmakers, publishers, editors, individual institutions, readers, and reviewers.

Historians of science and of geography have also illuminated the geographical sensibilities surrounding how knowledge is produced, moved and read, namely how knowledge was made and received differently for and by audiences in distinct locations. This geography of production and reading was apparent in the physical format of texts, as McKenzie indicates, which was a result of interactions between producers and, as Keighren elucidates, influenced the way knowledge was received by readers.[148] The material format of a single text was amenable to producers' desires to promote a distinct message for audiences in particular locations: for example, through the translation of a book from English to German the materiality of the text was transformed and new meaning was imposed.[149] In this thesis, I consider in what ways the style and content of specific atlases were a reflection of particular individuals' part in the production process, as well as considering why and how these producers' adapted atlas format to readers' specific locations throughout the Empire. Map makers have also recognised the importance of readers' location since maps (like 'texts') are influenced by the individuals involved in production and, at the same time, are subject to different interpretations and varied usage by readers: 'the meaning of any given map will … vary between readers, over time, and between discourses'.[150]

I argue here that in order to fully study a particular genre of map and a specific type of school text, there is a need to examine its material format, content, and

[148] McKenzie (1986); Keighren (2010).
[149] Rupke (2000).
[150] Edney (2007), 85.

sociology. This leads to recognition of the importance of paratexts in the meaning of a specific atlas, as illustrated by historians of the book and historians of geography; alongside a consideration of how the knowledge presented was the result of reproduction and negotiation among producers over broader intellectual, political, cultural and economic beliefs and traditions; and to intricate analyses of the people involved in the production, movement and use of specific texts.[151]

This study of the nature of knowledge, its content and style, also applies to the archive since, like texts, archives are human constructs with particular discursive and literal functions owing to their past and present uses. Part of my research is acknowledging the partial, selective and constructed nature of the archive, and of my findings made through it in the following chapters.

[151] Mayhew (2007b); McGann (1991), Genette (2007), Keighren (2010); Maddrell (1998), Ploszajska (1998); McKenzie (1986); Darnton (1982); Withers (2005).

3

Producing British school atlases: mapmakers, publishers and geographers

Introduction

The business records of the Bartholomew Archive provide hitherto unexamined data on the production of school atlases. In this chapter I refer to the production activities of John Bartholomew & Son in the light of these records, extracting general trends in the number and type of atlases produced. Some map historians have conducted similar studies on other genres of map, considering the interdependence between map and atlas production and their broader political, social and cultural settings.[1] In this chapter I suggest that the narratives presented in school atlases were shaped by more than what Brian Harley has called 'external power'—the dominant discursive influences on map production and mapmakers: such influences were intertwined with the firm's personal and business relationships and these associations were important in informing the character of the production process and, consequently, I suggest, the style and content of atlases.[2] Harley alluded to the influence of producers' associations on map production in his concept of 'internal power', or the internal voice of the mapmaker which, according to Harley, was negotiated between external political motivations (external power), the conventions of mapmaking, and an 'unwritten social consensus' as to what maps should contain.[3]

In this chapter I argue that school atlases should be analysed in light of the associations between mapmakers, publishers and geographers, and that their style and content must be situated in not only their political and economic contexts but in relation to the nature of geography's disciplinary character in the universities and schools. I will look first at the chronology of Bartholomew's school atlas production, considering its reflection of specific political developments, but I will move on to consider how patterns in atlas production can be elucidated in more detail through

[1] Heffernan (2005); Pedley (2005).
[2] Harley (1989a).
[3] Harley (2007).

my analysis of mapmaker-publishers' epistolary interactions: the nature of atlas production is evident, as I demonstrate here, in the negotiations mapmakers and publishers conducted over sale and profit. At the same time, I will demonstrate that Bartholomew's school atlas production was characterised by perpetual reusing of maps and prefatory features in different atlases for different publishers and/or audiences.

This chapter is also concerned with the role geographers played in atlas production, evident, in part, through the affinity atlas' stylistic features and epistemological content had to debates among geographers about the subject's scope and aims. I will illuminate this relationship between atlas production and geography's disciplinary progress through both a material hermeutics, examining the physical format of school atlases, and at the same time through an overview of atlas' methodological approach and episteme.

Deconstructing Bartholomew's production records

School atlases must be situated within their broader political and cultural milieux. Such an approach to map production is taken by Heffernan in examining trends in the number of maps appearing in French and British newspapers between 1875 and 1925. Heffernan illuminates how newspaper cartography at different times promoted and challenged ideas of empire in both countries.[4] School atlas production was similarly intertwined with broader cultural and political events. From an analysis of Bartholomew's DB and IB (see chapter 2), recording the number of works (including atlases) produced daily by the firm, we can deduce the volume and trend of school atlas production between 1880 and *c.*1930. Figure 3.1 reveals limited school atlas production between 1880 and 1886; an increase from 1887 to 1895; and successive patterns of sharp rise and fall, from a high of 47,580 atlases between 1914 and 1915, a drop to 12,850 in the period 1916–17, and a peak in production in 1922 and 1923.

This pattern of peaks and troughs is confirmed by Bartholomew's PR, recording the daily printing of maps and atlases by the firm (see chapter 2). Like figure 3.1., figure 3.2 presents a general upward trend in school atlas production between the late nineteenth and early twentieth centuries: it is evident that there was

[4] Heffernan (2009).

a downturn in printing between 1880 and 1893, similar to the general production pattern in figure 3.1; by 1898, slightly later than figure 3.1 suggests, the number of school atlases began to increase, rising until 1914 in which year 80,630 atlases were printed; reduced printing in the period 1914–19 was followed by successive rises and falls, although a general upward trend endured; and in 1928 there was a sharp peak in school atlas printing before a correspondingly sharp fall in 1929.

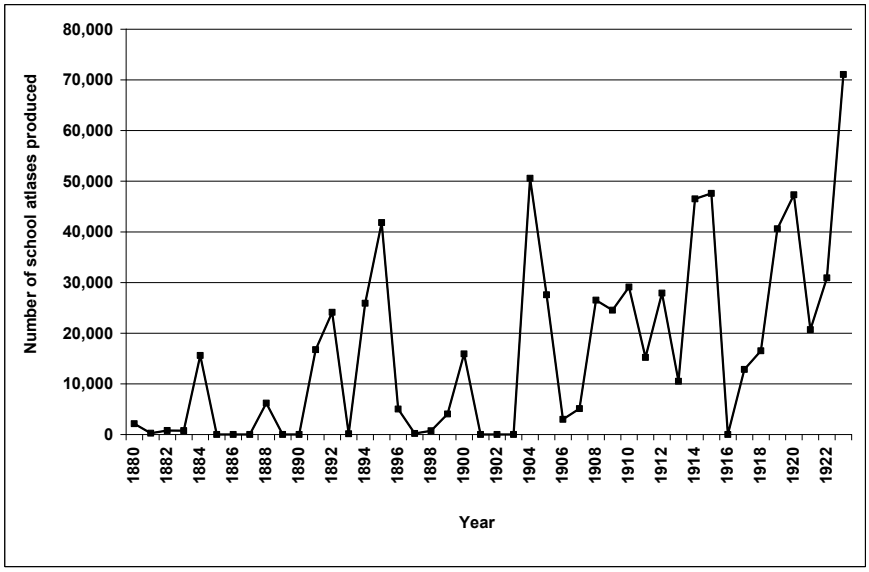


Figure 3.1. Bartholomew's school atlas production, 1880–1923
(Source: NLS, Acc.10222, Business Record 297–307, Day Books (DB); Business Record 632–650, Invoice Books (IB)).

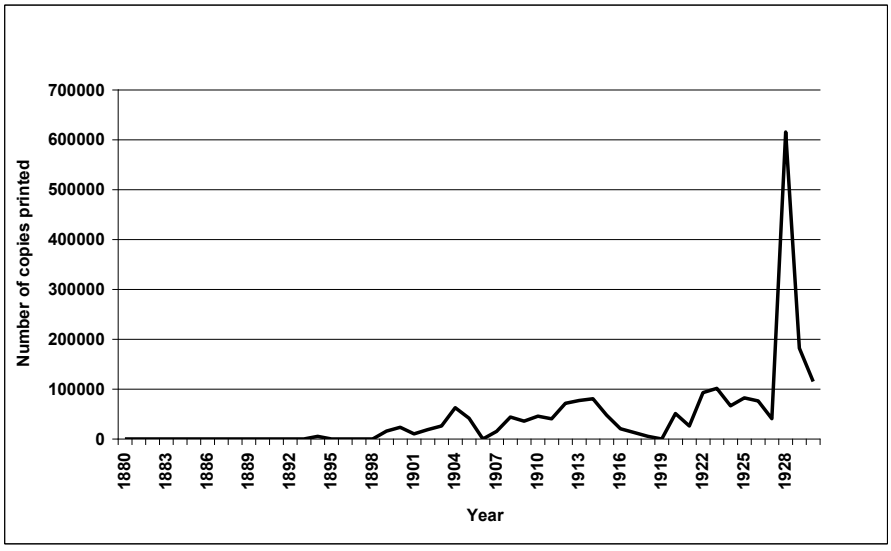


Figure 3.2. Bartholomew's school atlas print record, 1880–1930
(Source: NLS, Acc.10222, Printing Record (PR), 1–72b, 1880–1930).

The broader contextual influences on this pattern of production are, in part, deducible through closer analysis: that few atlases were produced in 1914–19 can be easily ascribed to the effects of World War I (1914–18), when Bartholomew's map production was predominantly overtaken by government and popular war mapping and when the supply and price of materials hindered production activities (Fig. 3.1 and 3.2). For similar reasons, the sharp fall in school atlas production between 1900 and 1903 may be explained, in part, by its correspondence with the Second South African (Boer) War (1899–1902), an event Heffernan sees as an important influence in popular newspaper maps (Fig. 3.1).[5]

This concurrence between map and atlas production and broader political and societal trends has also been demonstrated in relation to what many scholars refer to as the 'New Imperialism' of the 1880s, characterised by the establishment of British imperial rule in India and the European powers' "scramble" for Africa, and which can explain something more of Bartholomew's production activities.[6] This New Imperialism 'changed public perception of colonies from expensive millstones to heroic places', and led to an increase in juvenile migration, a fact often encouraged in geography textbooks (see chapter 6).[7] The upward trend in the total number of atlases printed by Bartholomew in this period (Figs. 3.1–3.2 above) can therefore also be linked to these expansionist conditions. This is evident if we consider how many of these atlases were produced for audiences beyond the UK: the provision of atlases for the 'old' colonies of Canada and Australasia and for the 'new' territories of India and South Africa shows a general upward trend from the late nineteenth century (Fig. 3.4). For example, between 1880 and 1889 just 5,350 atlases were made for Canadian schools, while 147,027 Canadian atlases were produced between 1900 and 1923. Whilst atlases for pupils overseas were never produced in the same numbers as those for UK readership, they nevertheless formed a significant part of Bartholomew's school atlas production. Atlases for Canadian schools dominated

[5] Heffernan (2009).
[6] Hudson (1977) describes geography's 'new' and 'modern' state, dating from the 1870s, which he believed emerged as a tool of imperialism. Maddell (1996) refers to the 'New Imperialism' in relation to school textbook representations of the British colonies. Heffernan (2009) sees the development of new colonial territories as influential in the way British and French newspapers represented imperial territories.
[7] Maddrell (1996), 373.

Bartholomew's overseas production, followed by Indian school atlases and, in much smaller number, atlases for Australasia and South Africa (Fig. 3.4).

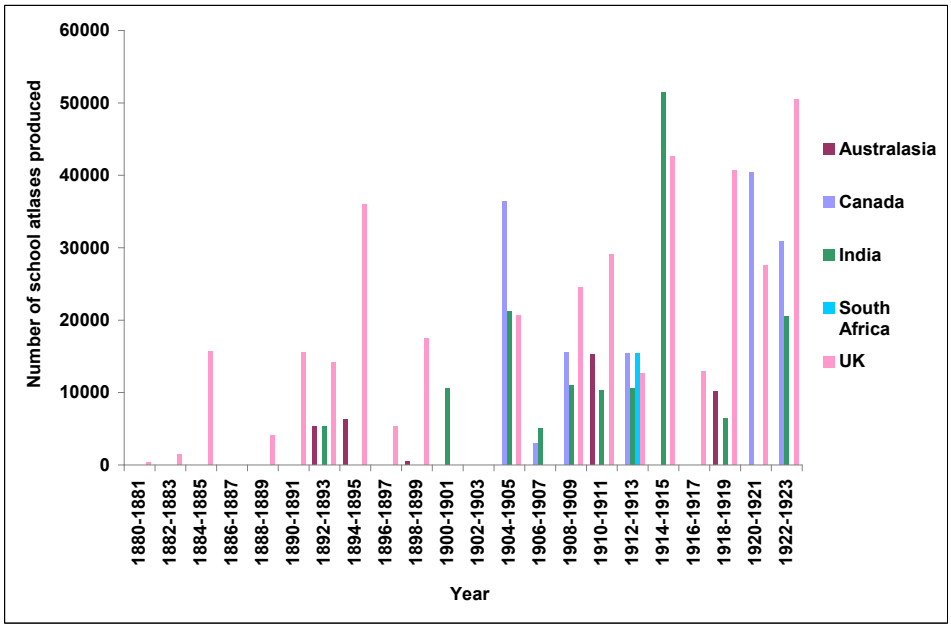


Figure 3.3. School atlases for the Empire, 1880–1923 (Source: NLS, Acc.10222, Business Record 297–307, Day Books (DB); Business Record 632–650, Invoice Books (IB)).

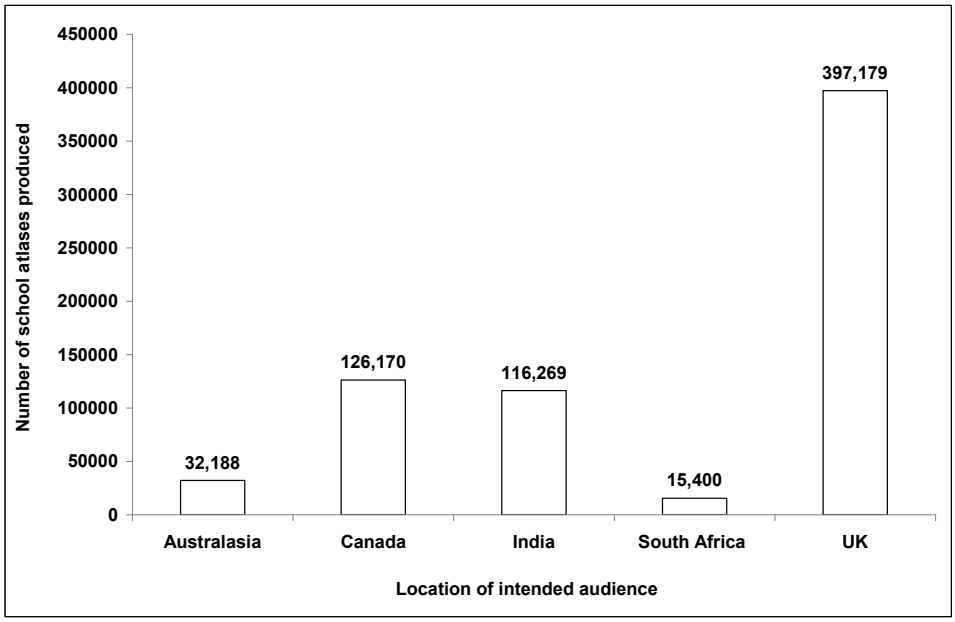


Figure 3.4. Bartholomew's markets, 1880–1923 (Source: NLS, Acc.10222, Business Record 297–307, Day Books (DB); Business Record 632–650, Invoice Books (IB)).

Atlas production at the hands of publishers, mapmakers, and geographers

The effect of war and changes to the workings of Empire, however, explain only in part the vicissitudinous nature of atlas production. This chapter also situates school atlases in relation to the associations and interactions involved in their production. I do this in order to understand the broader political and cultural contexts of atlas production in light of the people involved. An increase in school atlas production in the late nineteenth century and a corresponding increase in atlases for the colonies can be understood more fully when we consider the business and personal relationships between Bartholomew and different educational publishers commissioning these atlases. School atlases also received contribution from geographers and, I suggest here, they should thus be studied in conjunction with their intellectual tradition, namely geography, in order to understand the affinity between atlases and the individuals and epistemology shaping geography's disciplinary development. The production graphs, I argue, are thus not simply a record of the number of atlases made, nor only of the broader political and cultural circumstances of their production, but they are also a reflection of the associations—business and personal—between mapmakers, publishers, and geographers.

We can begin to 'unpick' the nature of school atlas production by considering first Bartholomew's relationship with educational publishers. Bartholomew's school atlases were a small proportion of its overall production, and in more popular map genres Bartholomew eventually published its own works. In contrast, in the school atlas market the firm maintained its role as 'mapmaker', never branching into educational publishing: Bartholomew's school atlases were commissioned largely by other mapmaker-publishers, the result of communicative interaction between different individuals from distinct professional backgrounds.

One publisher of Bartholomew's school atlases was Thomas Nelson & Son. Between *c.*1880 and *c.*1923 Nelson produced the highest number of school atlases with Bartholomew, totalling 208,856 atlases (Fig. 3.5). Nelson's collaborations with Bartholomew were followed (in declining order of frequency) by OUP, largely its London branch, which made 185,476 atlases with Bartholomew, and next by Macmillan & Co., London, producing 79,201 atlases. Other publishers producing fewer school atlases with Bartholomew at this time included London firms George

Harrap & Co., Meiklejohn & Son, John Walker & Co., and George Philip & Son, which produced, respectively, 50,500; 46,781; 43,328; and 15,611 atlases. Philips' limited involvement with Bartholomew in atlas production (producing 15,611 atlases) was linked to the different character of Philips' production activities. These, unlike Bartholomew's inter-institutional ventures in the school atlas market, were predominantly conducted as a single institutional enterprise in which the firm engraved, printed and published its own works.[8]

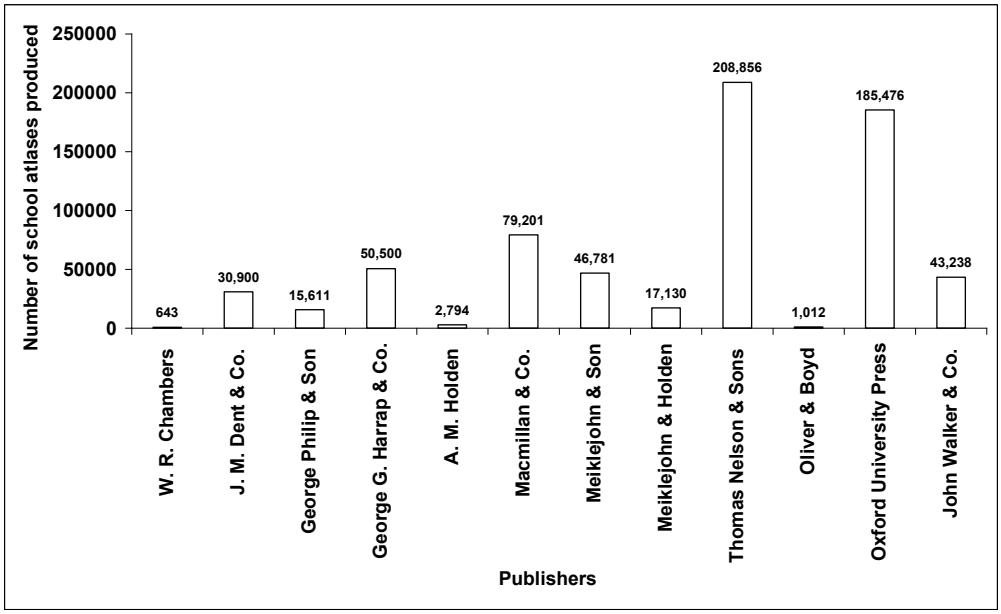


Figure 3.5. Publishers of Bartholomew's school atlases (1880–1923) (Source: NLS, Acc.10222, Business Record 297–307, Day Books (DB); Business Record 632–650, Invoice Books (IB)).

If we 'cut' through Bartholomew's production records again we find that Nelson was also the most active publisher in the production of atlases for pupils in colonial settings. Nelson was the only publisher producing atlases with Bartholomew for all four imperial markets—Canada, Australasia, India and South Africa—in the period 1880–1923, although its focus was principally on atlases for pupils in Canada (Fig. 3.6). The firm of J. M. Dent & Son was also active in the Canadian market. Bartholomew's atlases for Indian readers, however, were published mostly by Macmillan & Co., and then in descending order by OUP and Nelson & Sons. George Philip & Son, not shown on this graph due to its limited business connections with

[8] Unfortunately, little of the George Philip Archive survives for the late nineteenth and early twentieth centuries.

Bartholomew in relation to school atlases, also produced atlases for children in parts of the empire beyond Britain, namely for pupils in South Africa (Fig. 3.7).

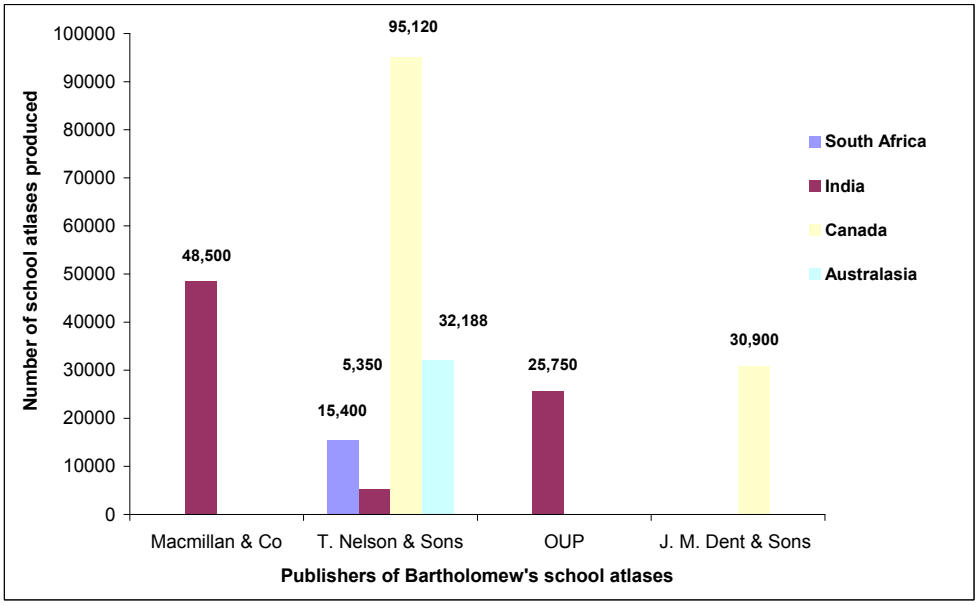


Figure 3.6. Publishers in the overseas school atlas market (1880–1923) (Source: NLS, Acc.10222, Business Record 297–307, Day Books (DB); Business Record 632–650, Invoice Books (IB)).

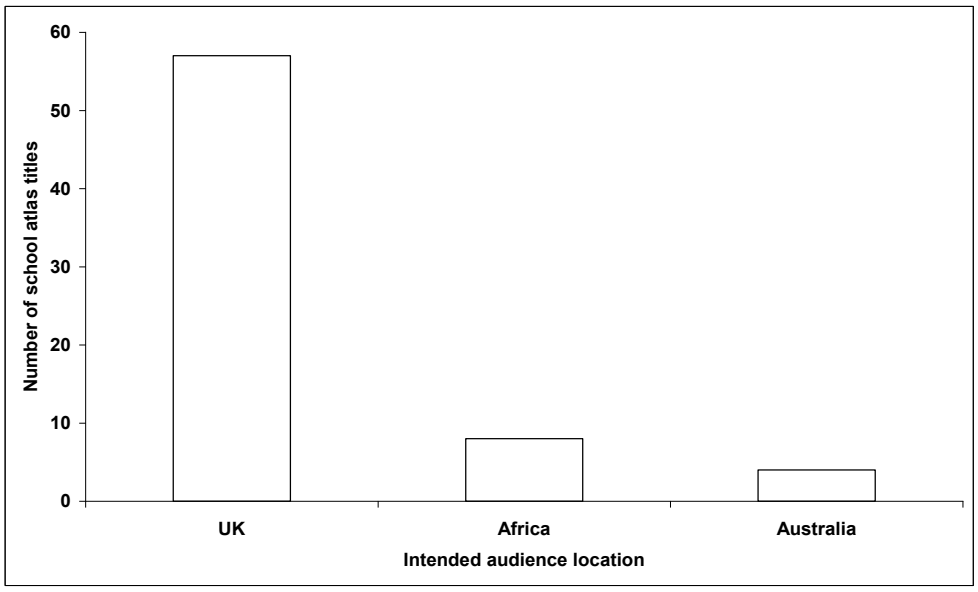


Figure 3.7. George Philip and Son's intended markets, 1870–1930. This highlights the number of school atlas titles intended for certain audiences. It does not indicate the number of copies made of each of these since there is no data available on Philip's atlas production (Source: extant school atlases).

The business networks Bartholomew and these publishers were operating within thus facilitated the production of geographical knowledge not only for pupils in Britain but also for parts of the Empire beyond (see chapter 5). The increased production of school atlases (Figure 3.1–3.3) was thus dependent on these associations. In relation to atlases for overseas specifically, Nelson and Bartholomew's atlases for imperial locations relied on Nelson's branches in several places around the Empire, including Edinburgh (its mother branch); London; Oxford; Canada; and in New York, as well as having representatives in South Africa, Toronto and Australia. Dents' involvement in the production of atlases for Canada was also linked to its Canadian branch, located, like Nelsons', in Toronto (Fig. 3.6).[9] Similarly, the distribution of Bartholomew and Macmillan's school atlases for Indian schools was facilitated by Macmillan's establishment of branches in Bombay in 1901, Calcutta in 1907 and in Madras in 1912. Macmillan also had agents in Bangalore, Colombo, and Rangoon.[10] OUP was the publisher with the most extensive overseas connections, with branches in Oxford, London, Edinburgh, Glasgow, Copenhagen, New York, Toronto, Cape Town, Bombay, Calcutta, Madras, Shanghai and Melbourne.[11] These links overseas were reflected in its production practices which, after its activities in the UK school atlas market, were most extensive in India (Fig. 3.6).

Along with mapmakers and publishers, geographers and other professionals were also implicated in the production of school atlases. Many professionals contributed to Bartholomew's school atlas production, some of which, as Maddrell has revealed, were also engaged in the writing of school textbooks (see chapter 2), and not all of who I draw on in detail in this thesis.[12] They include Lionel William Lyde, professor of Economic Geography at University College London, who was involved in the *School Economic Atlas* (1910); William Hughes, formerly Professor of Geography at King's College London, who contributed to the *Atlas for Beginners*

[9] Dent also had connections to the American school atlas market, often publishing school atlases, such as its *Literary and historical atlas of Asia* (London: J. M. Dent and Co., 1912), in association with the New York firm of Edward Payson Dutton.
[10] Van Arsdel (2004); Macmillan had branches in New York and Melbourne.
[11] NLS, Acc.10222, Business Record 297–307, Day Books (DB); Business Record 632–650, Invoice Books (IB); Printing Record (PR), 1–72b, 1880–1930.
[12] Maddrell (1998).

(1870); John Paul Goode, American professor of Geography at the University of Chicago, who communicated with Bartholomew over the production of his *School atlas for American schools* (1925)*;* and historian and geographer William R. Kermack, who collaborated with Bartholomew over the *Modern School Atlas* (1886).[13] Non-geographers also contributed to the school atlas market, including Karl Reginald Cramp, British-Australian historian and schools inspector; Charles Grant Robertson, historian and Academic Administrator at Oxford University; Thomas S. Muir, mathematician and later Superintendent of Education in Cape Colony, South Africa; School headmasters Samuel Butler and Charles Colbeck; and writer and literary editor Ernest Rhys.[14]

Bartholomew was not the only firm producing atlases with geographers, historians, and other professionals. George Philip and Son maintained a connection with English geographer William Hughes. Hughes was named as editor *in Philips' select atlas of modern geograph*y (1870), *Philips' atlas of physical geography* (1870), *Philips' first school atlas* (1870) and in *Philips' instructive atlas of modern geography* (1885).[15] These works continued to be published posthumously after Hughes' death in 1876. George Philip, manager of the firm, did not rely on Hughes alone to assist in atlas production. In 1894, Philip appointed geographers Ernst Ravenstein, John Scott Keltie and Halford Mackinder editors of a 'new geographical

[13] *School economic atlas* (1910, London: Oxford University Press); *Atlas for beginners* (1870, London: George Philip and Son); *Goode's school atlas* (1925, New York: Rand McNally and Co.); *Modern school atlas* (1886, Edinburgh: W & A. K. Johnston).

[14] Cramp contributed to the *Australasian school atlas* (1915, London: Oxford University Press); Robertson was involved in the production of two school atlases with Bartholomew: the *Historical and modern atlas of the British Empire* (1905, London: Methuen Publishing Ltd.) and the *Historical atlas of modern Europe from 1789 to 1914* (1925, London: Oxford University Press); Thomas Muir produced two school atlases for South Africa in collaboration with Bartholomew and Thomas Nelson and Sons: the *Atlas for South African schools* (c.1899, Edinburgh: Thomas Nelson and Sons) and the *Advanced atlas for South African schools* (1903, Edinburgh: Thomas Nelson and Sons); and Butler was involved in the making and publishing of London publisher J. M. Dent's *Atlas of ancient and classical geography* along with John George Bartholomew, published first in 1907 (London: J. M. Dent and Co.). Rhys also worked with Bartholomew and Dent on the making of the *Literary and Historical atlas of Europe* (1910, London: J. M. Dent and Co.). Colbeck contributed, along with John George Bartholomew, to the *Public schools historical atlas* (1885, Longmans, Green and Co.), published by Longmans, Green and Co, London.

[15] *Philips' select atlas of modern geography* (1870, London: George Philip and Son); *Philips' atlas of physical geography* (1870, London: George Philip and Son); Philips' first school atlas (1870, London: George Philip and Son); and *Philips' instructive atlas of modern geography* (1885, London: George Philip and Son). Details of Hughes' involvement in the making of atlases and maps is unknown since the Philip Archive's correspondence or business records (uncatalogued), housed at the RGS, London, are limited for the late nineteenth and early twentieth centuries.

series', which included the *Systematic atlas* (school edition), published between 1894 and *c.*1926.[16] Philip similarly engaged the interests of Ramsay Muir, professor of Modern History at the University of Liverpool and, later, at the University of Manchester. Muir produced several atlases with Philip, including a *New school atlas of modern history* (1873), the *New historical atlas for students* (1911), a *New school atlas of universal history* (1911) and *Philips' young students' atlas* (1928).[17] Table 3.1 provides a summary of the individuals, many of them geographers, involved in Bartholomew's and other mapmaker-publisher's school atlas production.

Table 3.1. Individual professionals' collaborations with publishers.
Names in red indicate limited biographical information available.

Professionals	Publishing and/or mapmaking firms
Lionel William Lyde, Professor of Economic Geography, University College London.	John Bartholomew and Son; Oxford University Press (OUP)
Karl Reginald Cramp, public schools inspector and historian, Melbourne, Australia.	John Bartholomew and Son; Oxford University Press (OUP)
Charles Grant Robertson, historian and academic administrator, Oxford University.	John Bartholomew and Son; Oxford University Press (OUP); Methuen and Co.
William Hughes, cartographer, geographer, and teacher; former Professor of Geography, King's College London.	John Bartholomew and Son; George Philip and Son; Cassell and Co.
William R. Kermack, historian, geographer.	John Bartholomew and Son; W. & A. K. Johnston
Thomas S. Muir, mathematician, and superintendent of education, Cape Colony, South Africa.	John Bartholomew and Son; Thomas Nelson and Sons
T. A. Smith	John Bartholomew and Son; Macmillan and Co.
Samuel Butler, headmaster of Shrewsbury School, Shropshire, England; and Bishop.	John Bartholomew and Son; J. M. Dent and Co.

[16] *Systematic atlas* (1894, London: George Philip and Son).
[17] *Philips' young students' atlas* (1873, London: George Philip and Son); *New School atlas of modern history* (1911, London: George Philip and Son); *New historical atlas for students* (1911, London: George Philip and Son); and *New school atlas of universal history* (1928, London: George Philip and Son).

Ernest P Rhys, writer and literary editor, London.	John Bartholomew and Son; J. M. Dent and Co.
Charles Colbeck, assistant Master at Harrow School, London.	John Bartholomew and Son; Longmans, Green & & co.
John Paul Goode, Professor of Geography, University of Chicago, United States.	John Bartholomew and Son; Rand McNally & Co.
John Miller Dow Meiklejohn; writer and educationalist.	John Bartholomew and Son; Meiklejohn and Son; Alfred M. Holden
Ramsay Muir, Professor of Modern History at The University of Liverpool, and later The University of Manchester.	George Philip and Son
John Francon Williams, geographer.	George Philip and Son
John S. Keltie, secretary to the RGS.	George Philip and Son; W. & A. K. Johnston
Halford. J. Mackinder, Reader of geography at the University of Oxford	George Philip and Son
Ernst Ravenstein, geographer and chief cartographer to the RGS.	George Philip and Son
P.H. L'Estrange, assistant master at Malvern College.	George Philip and Son
H. Fullard	George Philip and Son
Edward F. Elton	W. & A. K. Johnston
Thomas Franklin	W. & A. K. Johnston
Ernest R Shearmur	W. & A. K. Johnston
E. D. Griffiths	W. & A. K. Johnston
James Bryce, school teacher in geography and mathematics at Glasgow high school; geologist; fellow of the Royal Society of Edinburgh.	William Collins, Son & co.
Marcus G. Morrison	George Washington Bacon & Co.
Charles Joppen, headmaster at St. Xavier's High School, Fort, Bombay.	Longmans, Green & Co.; Justus Perthes
George Goudie Chisholm, fellow of the Royal Geographical and Statistical societies and later first lecturer in geography at the University of Edinburgh.	Longmans, Green & Co.
J.H. Brady	Longmans, Green & Co.
Samuel Rawson Gardiner, English historian.	Longmans, Green & Co.
George Butler, headmaster of Liverpool College.	Longmans, Green & Co.
Richard Anthony Proctor, English	Longmans, Green & Co.

astronomer and science writer.	
Hugh Oakeley Arnold-Forster, politician and writer.	The London School Atlas Co; Edward J. Arnold
W. D. Johnston, geography master at Parktown High School, Johannesburg, South Africa.	T. Nelson and Son; Juta & Co. Ltd
C. Midgley	T. Nelson and Son; Juta & Co. Ltd
Anonymous elementary teacher	Adam and Charles Black & Son

The part geographers and other professional played in school text publishing is not surprising since they were among the leading professionals in geography or other subjects. Their willingness to produce atlases was, in part, strategic: geographical publishing became a platform for those eager to secure the positive fate of the discipline and thus their own career.[18] At the same time, school atlases (and other school texts) provided literary 'space' for people to promote, and negotiate, their individual opinions about geography's or other subjects' scope and aims.

What Bartholomew's production records show, therefore, is that atlas production was not only subject to particular political, cultural and economic discourses but it was at the same time bound up in the activities of mapmakers, publishers and geographers (or other professionals). In the remainder of this chapter I am concerned with how associations between mapmakers, publishers and geographers shaped and, at the same time, were influenced by the nature of atlas production and the style and content of school atlases. I will elucidate how mapmakers', namely Bartholomew's, interactions with educational publishers informed the practices used in the production of this genre of mapbook: concerns with profit and supply were connected to practices of reusing and recycling maps and atlases. Geographers or other professionals' involvement in atlas production is then presented as a nexus between mapmakers' and publishers' activities and wider discussions about the nature of geography (or other related fields of study) in the universities and leading societies. There is, however, recognition in this chapter that the relationship between university geography, the teaching of the subject in schools,

[18] Maddrell (1996); Livingstone (2003).

and school atlas production was complex, made so in part by a lack of consensus over geography's meaning as a discipline.

Mapmakers' practice: commercial concerns and reusing maps and atlases

Part of publisher-mapmakers' interactions were bound up in commercial agendas, one of which was, unsurprisingly, securing a profit. Bartholomew made several suggestions to various school atlas publishers to ensure a profit was made by both parties. One of these strategies was advising publishers to increase the size of the atlas edition they commissioned Bartholomew to produce: Bartholomew's managing director Graham Robinson told A. M. Meiklejohn that they should make 'the edition [of the *Comparative atlas*] as large as possible. 10,000 copies we (Bartholomew) consider a minimum. The cost of preparing the work is very heavy'. This advice was related to the second tactic Bartholomew advocated in school atlas production of lowering the published price of atlases. According to Bartholomew, a large edition of the *Comparative atlas* (1900) facilitated and even necessitated a lower published price because publishers could depend on the selling of many copies instead of selling a smaller number of more expensive atlases.[19]

Negotiating map and atlas price in this way was also a feature of eighteenth century French and British mapmaking and, as Pedley notes, 'the price of a map reflected several things besides profit'; in fact, 'the map seller needed to know who used maps (or atlases) and what could they afford'.[20] In the same way, in school atlas production price was also informed by Bartholomew's understanding of intended audience's spending capacity. A third possibility of ensuring profit, and one often instigated by publishers rather than Bartholomew, was a reduction in production cost, often facilitated by a reduction in the price and quality of paper or binding. Such an argument was made by publisher H. R. Dent to Robinson in relation the *Canadian school atlas* (1922) and Robinson's response epitomises the apprehension mapmakers felt in carrying out such a request. For Robinson:

> The question of cheapening the Canadian atlas . . . would, we fear, completely spoil the whole appearance of the work. All the difference that

[19] NLS, Acc.10222, Business Record 765, Outgoing Correspondence, Robinson to Meiklejohn, 31 May 1900; *Comparative atlas* (1900, *London:* Alfred M. Holden).
[20] Pedley (2005), 74.

> would be made by thinning the paper would really be very trifling, and we are honestly much averse to supply an inferior piece of work for the sake of such trifling saving, which, after all, might turn out to be no saving at all if it had the effect, as undoubtedly it would through time, of lessening the sale.[21]

The point here is not publisher and mapmakers' commercial concerns—this is an implicit aspect of atlas production—but rather the communicative interactions on which these iterative discussions on price and edition size depended.

Once decisions over edition size and production costs were made, Bartholomew was faced with the pressure of supplying school atlases within the time agreed with respective publishers. In the process of producing new editions of *Nelson's school atlas* (1930) for Australia, New Zealand and South Africa, Bartholomew received notification from Nelson's Director about demands from readers in each of the respective audience's locations. Graham urged Bartholomew to hurry along production: 'we are having inquiries every day from these countries for the new atlas, and to have to tell them that we will not be able to let them have them for ten weeks or eleven weeks is very serious'.[22] The OUP's *Indian school atlas* (1925) was in similar demand.[23] Not only was the atlas to be completed but, once finished, it required a long journey by ship to India: 'one of our [OUP's] Indian representatives, Mr Carrington, is now in this country and is enquiring how you are getting on with the new edition of this atlas. Copies are wanted in India by August'.[24]

Misunderstandings over the completion date of a school atlas between Bartholomew and publishers resulted in readers' demand going unmet. This was the case with the *Oxford advanced atlas* (1924).[25] Over a duration of two months between 26 July 1923 and 6 September 1923, OUP publisher E. C. Parnwell wrote to John Bartholomew about the urgent demand among readers for a new edition. The atlas was prioritised by the OUP owing to its good sale compared with other Oxford

[21] National Library of Scotland (NLS), Acc.10222, Business Record 795, Outgoing Correspondence, Robinson to Hugh R. Dent, London, 17 May 1924; *Canadian school atlas* (1926, London: J. M. Dent & Son).
[22] Edinburgh University Library (EUL), Centre for Research Collections (CRC), GB 237 Coll-25, Letter book 207, Graham to John Ian Bartholomew, 3 October 1929; *Nelson's school atlas* (1930, Edinburgh: Thomas Nelson and Sons).
[23] There is no extant published record of this atlas but it is mentioned in Nelson and Bartholomew's correspondence and Bartholomew's Printing Record (PR): NLS, Acc.10222, PR, 67a, folio 6a, Contents for the *Indian School Atlas*: *Physical and Political* (4th edition), 18 September 1925.
[24] NLS, Acc.10222, Business Record 792, Outgoing Correspondence, Humphrey Milford (OUP) to John Ian Bartholomew, 5 June 1923.
[25] *Oxford advanced atlas* (1924, London: Oxford University Press).

atlases, but after over a month with no reply Parnwell informed Bartholomew that 'we [OUP] are having to refuse orders day after day through not being able to give even an approximate date for the appearance of the new edition. The order was placed with you nine months ago, and we have not yet received any information about delivery'.[26] In a series of correspondence between Parnwell and Bartholomew, it became clear that the atlas was only just begun after the arrival of Parnwell's first letter on 26 July inquiring about its progress.[27]

The importance of the letter in the production of school atlases not only allows an analysis of the nature of mapmaker-publisher interactions—thus framing a methodological approach in my thesis—but it, more importantly, elucidates the practices behind atlases and the role of the epistolary communication as a form of knowledge exchange between producers. As Withers puts it in examining the 'networks of correspondence' upon which the production of Robert Chalmers's historical and geographical book of Scotland, *Caledonia*, depended: 'almost no attention has been given to the culture of letter writing in the making of geography, to the networks of correspondence underlying geography's books or, indeed, to the geographical and epistemological implications of correspondence.[28] In this chapter and thesis I elucidate the epistolary exchanges upon which school atlas production relied and situates them in their historical, geographical and intellectual contexts.

Reusing maps

The influence of these associations—evident in the letters exchanged between mapmakers and publishers—on the style and content of school atlases is manifest in Bartholomew's reusing of maps, diagrams, images, and introductory text between school atlases for different publishers and/or distinct audiences. This practice was applied to Bartholomew's use of the 'race' map of the world showing 'white', 'yellow' and 'black' type, (re)produced in many school atlases between 1880 and 1930 (Fig. 3.8). In the map itself, areas with mainly 'white type' were coloured pink, those areas populated predominantly by 'yellow type' were yellow, and where there

[26] NLS, Acc.10222, Business Record 792, Outgoing Correspondence, Parnwell to Bartholomew, 6 September 1923.
[27] NLS, Acc.10222, Business Record 792, Outgoing Correspondence, Milford to Bartholomew, 19 December 1923.
[28] Withers (2004), 34.

was dominant 'black type' a black/grey colour dominated. This map appeared in Nelson's *Atlas for South African schools* (1899) on plate 4, alongside a map showing the world's population density.[29] In the 1903 edition of the *Advanced atlas for South African schools* (1903), also published by Nelson, the same race map was positioned on plate 8, sharing a plate with a map showing the religions of mankind (Fig. 3.9).[30] The map was also used in this form in a number of Nelson's other atlases, including the *Atlas for Manitoba schools* (1904), *Atlas for Canadian schools* (1904), and *Royal Atlas for Canadian schools* (1920).[31] Similarly, OUP's *School economic atlas* (1910) included the same two maps of race and religion in each of its ten editions between 1910 and 1928 (see chapter 4 for more on the racial and moral discourses embedded in this map).[32] Bartholomew's business networks informed the nature of school atlases—their style and content—disseminated at this time.

[29] NLS, Acc.10222, PR, 30c, folio 208b–211, title page, prefatory note, contents page and maps for the *Atlas for South African schools,* 29 September 1899.
[30] NLS, Acc.10222, PR, 35a, folio 64–70, title, contents page, introductory letterpress and maps for the *Advanced atlas for South African schools*, 1 October 1903.
[31] In each of these atlases the race map, along with the map of world religions, was on plate four. There are no extant copies of these atlases but Bartholomew's PR provides evidence of their existence and indicates their style and content: NLS, Acc.10222, PR, 37a, folio 67–72, title and contents page for the *Atlas for Manitoba schools* and the *Atlas for Canadian schools*, 14 December 1904; NLS, Acc.10222, PR, 60a, folio 39 & 48, cover, title page and contents page for the *Royal Atlas for Canadian schools*, 2 August 1920.
[32] *School economic atlas* (1910; 1912; 1913; 1915; 1918; 1921), plate 13; *Oxford economic atlas* (1925, London: Oxford university Press), plate 13; *Atlas of economic geography* (1914; 1928, London: Oxford university Press), plate 13.

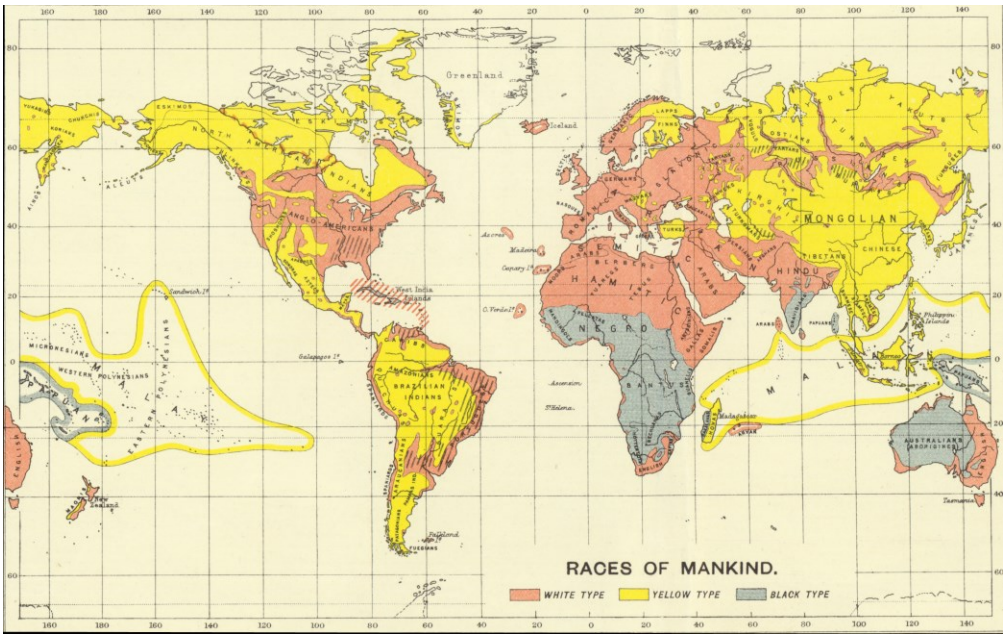


Figure 3.8. Map of the 'races of mankind' (Source: *School economic atlas,* 1910, plate 13). Reproduced by permission of the trustees of the NLS.

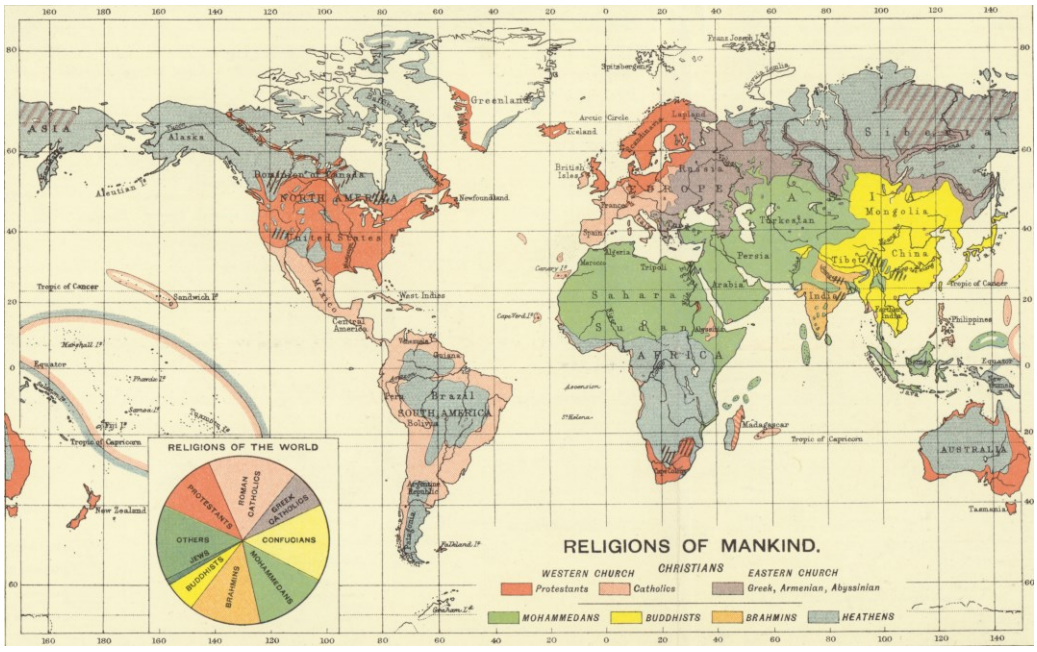


Figure 3.9. Map showing 'religions of mankind'. This map was positioned beneath the map showing world races in the *Advanced atlas for South African schools* (1903, plate 8), Nelson's *Atlas for Manitoba schools* (1904, plate 4), Nelson's *Atlas for Canadian schools* (1904, plate 4) and in the *Royal Atlas for Canadian schools* (1920, plate 4). Reproduced by permission of the Trustees of the NLS.

Introductory text in Bartholomew's atlases was also subject to reuse. John George Bartholomew's essay 'Some notes on maps and map reading' appeared in several school atlases between 1903 and 1930, including Nelson's *Advanced atlas for South African schools* (1903), and in the OUP's *Physical and political school atlas* (1913), *Indian school atlas* (1923) and *Oxford school atlas*.[33] Also reused in many of Bartholomew's atlases was a plate representing 'astronomical geography', which presented the connection between physical features and the solar system. Considering Bartholomew's atlases for OUP alone, this plate was found in the OUP's *Physical and political school atlas* (1913); *Physical and political school atlas* (1915); *Australasian school atlas* (1915); and the *Oxford school atlas for Australia and New Zealand* (1922) (Fig. 3.10).[34] This practice of recycling maps, texts and images between school atlases was enabled by Bartholomew's associations with many different publishers (see above) and it was a mapmaking convention in the Bartholomew firm that was connected to publisher-mapmakers' concerns with production costs and profit. The resultant homogeneity in school atlases style and content was at the same time related to the fact that atlas producers were informed by 'the language and rules within pedagogical as well as ideological discourses'; school atlases were embedded in the culture of geographical publishing.[35]

[33] *Nelson's advanced atlas for South African schools* (1903), v–xi; *Physical and political school atlas* (1913, London: Oxford University Press), iv–xvi; NLS, Acc.10222, PR, 65a, folio 26, frontispiece, introduction and index to the *Indian School Atlas*, 19, October 1923, ii–xv; PR, 67b, folio 129, frontispiece, contents and introductory maps and diagrams to *The Oxford school atlas*, 10 February 1926, ii–xvi.
[34] *Physical and political school atlas* (1913), vi; (1915), viii–ix; *Australasian school atlas* (1915), plate 1; *Oxford school atlas for Australia and New Zealand* (1922, Melbourne: Oxford University Press), viii.
[35] Maddrell (1998), 99.

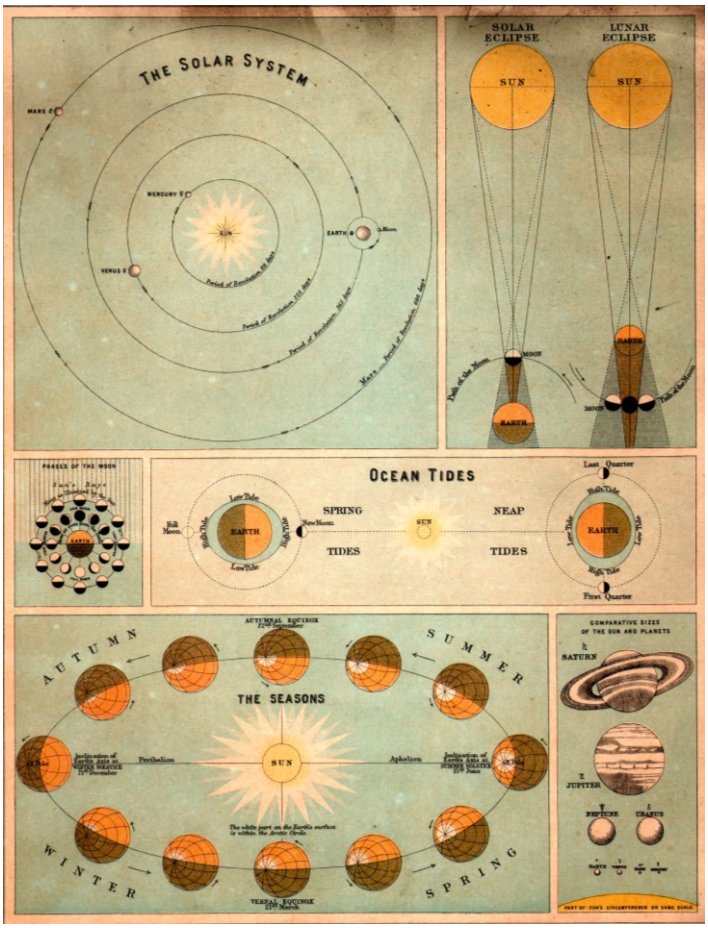


Figure 3.10. Astronomical geography (Source: Nelson's *School hand atlas* (1894, plate 1); *Macmillan's atlas for Indian schools* (1897, plate.1); Meiklejohn's *Comparative atlas* (1904, plate 1)).Reproduced by permission of the Trustees of the NLS.

This reusing of maps and prefatory features, however, was intertwined with other aspects of atlas production, such as the necessity of change and alteration between atlases owing to political and territorial changes. These were particularly important in school atlases in the aftermath of World War One. Territorial changes advocated in the Treaty of Versailles (1919) meant that in British school atlases existing maps of Europe had erroneous regional and national boundaries. In Bartholomew and OUP's *Advanced atlas* (1917), the map of Europe represented Germany, including Western Prussia, in its pre-war territorial status (Fig. 3.11).[36] In the 1924 edition, renamed the *Oxford advanced atlas*, the knowledge presented in the

[36] *Advanced atlas of physical and political geography* (1917, London: Oxford University Press), plates 26–27.

map, on the same plates as the 1917 edition, was altered to reflect the new post-war territorial landscape: Western Prussia was separated in the 1924 edition of the map to form Poland and Austria-Hungary was bifurcated, part of this territory becoming the countries of Czecho Slovakia, Yugoslavia and Romania (Fig. 3.12).[37] As Schulten has illuminated (see chapter 2) in relation to American maps made for popular consumption by American audiences, school atlases were made to respond to political changes, and these alterations to map content overtime mark 'the malleable nature of geographical knowledge'.[38]

[37] *Oxford advanced atlas* (1924), plates 26–27.
[38] Schulten (2001), 3.

Figure 3.11. Pre- (first map) and post-war (second map) central Europe in the (Oxford) *Advanced atlas* (Source: *Advanced atlas*, 1917; *Oxford advanced atlas* 1924, plates 26–7). Reproduced by permission of the Trustees of the NLS.

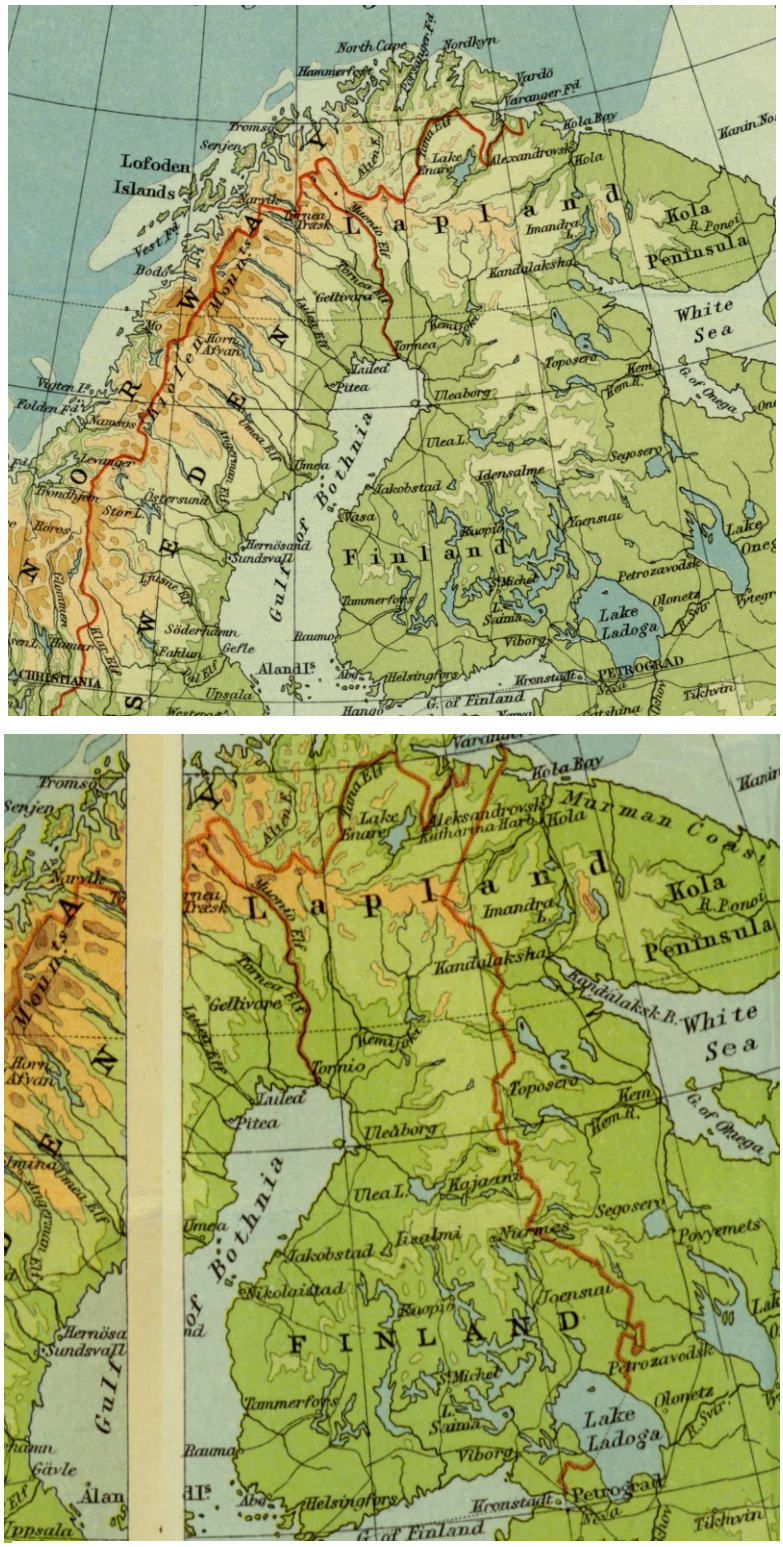


Figure 3.12. Finland before (first map) and after (second map) territorial alterations in the (Oxford) *Advanced atlas* (Source: *Oxford advanced atlas*, 1917, plates 26–7; *Oxford advanced atlas* 1924, plates 26–27). Reproduced by permission of the Trustees of the NLS.

What is important to note is that knowledge was never fixed and atlases—in both content and style—were capable of being altered. This mutual relationship between changing knowledge and the mutability of map content and atlas style was not only useful in accounting for territorial changes but it was often utilised by producers to secure readers' trust. This was the impetus behind alterations to prefatory features in the *Atlas for South African schools* (1899). But here alterations to content and style were necessitated less by the broader circumstantial impetus of war (although this was, ostensibly, part of the reason) than by a desire among producers to attract readers' trust. The preface to this atlas therefore altered in content between the fifteen editions recorded in Bartholomew's PR: the second 1899 edition made claims that the atlas 'has been considerably enlarged and improved' and the third edition in 1900 stated that 'special attention has been given to those in which alterations have been rendered necessary by the recent epoch-making series of events in South Africa [the Boer War] . . . all the other maps in the atlas have been carefully revised to date'.[39] Such references to up-to-date information and revision to geographical knowledge, however, did not always correlate with map content. In relation to the *Atlas for South African schools*, there were minor changes to map content between the first and second editions (both published in 1899), but in subsequent editions (1899–1917) map content appears to have remained largely unchanged. In this way, prefaces were literal spaces in the text but they were, at the same time, discursive devices aimed at securing readers' trust.

This rhetoric of up-to-date knowledge in school atlases was also connected to atlas' intended audience location (see chapter 6). This shows us that the reusing of maps and other features was a function driven and necessitated not only by publisher-mapmakers' networks of production, by political change, nor only by concerns about securing readers' trust, but it was also a matter of meeting distinct readers' needs (based largely on their location). An instance of this response to the geography of reading was evident in the *Satchel school atlas* (1894), initially published by London firm John Walker and Co. but reprinted in 1895 under 'E. W. Cole, Book Academy, *Melbourne, Sydney and Adelaide*' with 'John Walker and Co.'

[39] NLS, Acc.10222, PR, 30c , folio 208b, title page, prefatory note and contents for *Atlas For South African schools*, 29 September 1899; PR, 32a, folio 23.2, title page and contents of *Atlas for South African schools*, 5 November 1900.

subtly inscribed on the inside cover.[40] In the same year, the *Satchel school atlas* was published with little change apart from the inscription of the North of England School Furnishing Co., Newcastle upon Tyne on the title page alongside John Walker & Co. Changes to inscriptions on the title page 'translated' the text into an atlas distinctly for Newcastle pupils without altering map content (see chapter 5 for more on this localising of school atlases).[41] Distinctions in the prefatory features of these two versions of the same atlas made the maps contained applicable to audiences in certain locations: these alterations indicate that 'forms produce meanings and that a text, stable in its letter, is invested with a new meaning and status when the mechanisms that make it available to interpretation change'.[42]

Bartholomew's school atlases were in this way always hybrid texts, their origin difficult to determine due to producers' perpetual exchange of stylistic features and content between them. As Adso understood in Umberto Eco's *The name of the rose*: 'not infrequently books speak of books', and this literal exchange of material features and the conceptual exchange of knowledge between texts also echoes what the writer of Ecclesiastes recognised when he revealed that 'there is nothing new under the sun'.[43] In the case of Bartholomew's school atlases this seems to have been true: atlases were interconnected—their style and content reused for different purposes. This relates also to notions of textual hybridity, which has been studied as a function of textual reception and supposes that readers' interpretation of a text was shaped by their reading histories, by their previous experience and knowledge of other texts.[44]

The reusing of individual maps, letterpress and images in school atlases, however, reveals that this exchange between texts was not just a process realised in readers' engagement with the printed text. This 'bleeding' between texts was also a feature of production, through changes to prefatory features, as well as by the explicit updating of map content in an atlas. By analysing the changing style and content of

[40] NLS, Acc.10222, PR, 21b, folio 51c, frontispiece and contents of the *School hand atlas*, Australasian edition, 5 September 1894; PR, 23, folio 26d, cover of the *Satchel school atlas*, 30 July 1895; *Satchel school atlas* (1895, London: John Walker & Co.).
[41] NLS, Acc.10222, PR, 23, folio 26e, full copy of the *Satchel school atlas*, 30 July 1895.
[42] Chartier (1992), 3.
[43] Eco (1980), 277; Bible: New International Version, Ecclesiastes 1: 9.
[44] Livingstone (2005).

any school atlas we can see that, as McGann puts it, 'every text had variants of itself screaming to get out, or antithetical texts waiting to make themselves known'.[45] This metamorphic capability was a feature of texts that was often implemented by school atlas producers. It was facilitated by, and it responded to: associations between Bartholomew and different publishers, enabling reduced production costs; political developments; demands for up-to-date and credible knowledge; and audience location.[46] Thus the transformation of Bartholomew's school atlases relied, contrary to what Eisenstein sees as the necessary fixity of books, on the malleability of prefaces, titles, typefaces, and other paratextual features—changes to which enabled the 'translation' of knowledge over time and space (see chapter 6) and between texts.[47]

Atlas production in its intellectual and educational contexts

Atlas style and content are records of the nature of mapmakers and publishers' interactions and production practices, and they are witnesses of how school atlases were implemented in political developments and in the provision of up-to-date and relevant geographical knowledge for specific audiences. At the same time, as I indicate here, school atlases also illustrate the affinity between atlas production and geography's development in higher education and schools. This link was facilitated by the involvement of geographers and other professionals (indicated above) and it is necessary to elucidate how the format atlases took and the knowledge they represented were bound up in concerns with geography's disciplinary character and with negotiations of this between different atlas producers.

This interconnection between geography's development and its texts has been addressed by Mayhew, examining the materiality of English geography texts in relation to their consonance with broader changes in geography's position in Higher Education.[48] Expectations of a 'new' geography in the late nineteenth century were, in part, a consequence of, as Mackinder termed it, the closing of the world.[49] At the same time, disciplinary developments led to and were facilitated by changes in the

[45] McGann (1991, 10).
[46] McGann (1991, 10).
[47] Gennette (2007); see Eisenstein (1983) (chapter 2).
[48] Mayhew (2007b).
[49] Mackinder (1887).

print culture of geography's textbooks. In the same way, geographers' campaign to promote geography's scientific nature and its professionalisation in the universities occurred concomitantly with attempts to systematise and 'modernise' school atlases. Discussions and debates among geographers and others in the meetings and journals of leading geographical institutions at this time reveal considerable anxiety about the progress of geographical education in the universities and schools.[50] School atlases in the late nineteenth and early twentieth centuries were one textual form of geography's character and their style and content allow an analysis of the specific forms geography took. In his study of geography's texts, Mayhew used material hermeneutics—an approach to the study of texts that elucidates the meaning residing in physical format—and my analysis of school atlases is informed by this idea that knowledge cannot be separated from the print medium in which it is expressed.[51]

In the late nineteenth century, geography began to be represented less as a general topic of education with links to astronomy, geology, mathematics, history, and classics, and more as a scientific discipline consisting of particular fields of study. This general diversification of the discipline was both reflected in and consolidated by certain material formats and specific knowledge content in school atlases. The purpose in the remainder of this chapter is to give an overview of how these broad developments in the nature of geography as a discipline were connected to changes in the style and content of school atlases.

In 1912, the BAAS appointed a committee within Section E (Geography) to 'enquire into the choice and style of atlas, textual, and wall maps for school and university use'. The committee included John L. Myres, George G. Chisholm, Colonel Charles F. Close, and E. A. Reeves, most of who were also part of committees under the BA, RGS, RSGS and GA to inquire into the position of geography in the universities and schools.[52] The committee's 1915 report (published in 1916) outlined the ideal order and content of maps in any school atlas. It suggested a scheme that followed a common hierarchical spatial pattern, progressing from

[50] See Chisholm (1908); Close (1911, 1912); Mackinder (1887, 1921); Mill (1892); Keltie (1897, 1915).
[51] Chartier (1992); Mayhew (2007b); McGann (1991); McKenzie (1986).
[52] British Association for the Advancement of Science (BAAS) Archives, Oxford, Dept. BAAS, Item 330, Appointments to Committees, 1888–1916, appointing of committee to 'Enquire into the Choice and Style of Atlas, Textual, and Wall Maps for School and University Use', 1912.

world maps to maps of Europe, America, Asia, Australasia and Africa. Producers were informed that the knowledge emphasised in maps of these locations should be both physical and political; include interactions between these topics; and be supplemented by specific climatic information. Whilst maps representing the distribution of population were of value, according to the committee geological and vegetation maps were not essential and were to be included only if possible. In contrast, historical and economic maps were not to be included in a 'general school atlas', but should be confined to 'special atlases'. As well as the sequence and content of maps, the committee included instructions on paper size, colour shading, place names, inset maps, projection, and scale. Atlas producers were encouraged, for instance, to refer to an article on 'Relief in cartography' in *The Geographical Journal* by geologist and museum director (at the Science Museum, London), Captain H. G. Lyons, 'to whom the committee is indebted for much help and advice'. The report went on to present other stylistic guidelines. Maps were to be clear and should avoid overcrowding of place names, and should maintain uniform projections and scales throughout.[53]

Four my purposes here, the BAAS report is an example of the emphasis some geographers placed on clarifying their subject's aims and making these clear to an influential and learning school public. If geography pupils, so geography's practitioners thought, had access to systematic and precise geographical knowledge through school atlases, especially if it was inspired by well known experts in the field like Lyons, then more likely was geography's improved position in schools and universities. This link between these two educational settings, namely universities and schools, was often made by geographers attempting to promote geography's educational value. For instance, in 1905 a memorandum was circulated by the RGS on the need to establish a chair of Geography at the University of Edinburgh. In this circular it was declared that the teaching of geography 'in our schools and colleges' would not be satisfactory until 'our universities . . . provide, in the first place, adequate training for teachers'.[54] This perceived mutual exchange between school and university geography was also sometimes reversed, the state of teaching in

[53] Walter (1916), 156, 151.
[54] NLS, Acc.10222, Business Record 924, Incoming Correspondence, Circular on the Chair of Geography at the University of Edinburgh, June 1905.

schools seen by others to be detrimental to the universities since 'no teaching of geography really worthy of university would be practicable until boys [sic] came up from school with a better grounding in the necessary rudiments'.[55]

The direct influence of the BAAS' guidelines on individual school atlases produced after the report's publication in 1916 is difficult to measure. There is only limited evidence available by which to study any stylistic change and to know its determinants. Despite this, the influence geographers' discussions on style and content had on atlases is apparent in what is my focus in the remainder of this chapter, that is, atlas style and content.

Although the exact date is uncertain, an entry in John George Bartholomew's diary between *c.*1880–*c.*1920 presented five bullet points under the title of 'qualities of [a] good school atlas' (Fig. 3.13). Bartholomew was not only head of the mapmaking firm of John Bartholomew & Son but he was also active in the geographical community. He was in fact one of the instigators of the memorandum on establishing a Geography Chair at Edinburgh (mentioned above). His musings about the necessary features of a school atlas in his diary suggest that he was concerned with the same issues of clarity raised in the BAAS report. According to the note, a 'good' atlas was one which was a 'fairly large size'; contained only the necessary information; presented world maps in 'uniform and spherical projections'; included large maps of 'a uniform scale'; and prevented overcrowding in maps. Not only were Bartholomew's notes similar to some of the guidelines given by the BAAS but they were also in line with Hugh Robert Mill's guidance to teachers on 'geographical books and appliances' (including atlases): 'a school atlas is to be judged by the educational value of every line, tint, and name upon it'.[56]

[55] Mackinder (1921), 378.
[56] Personal Collection of the Bartholomew family, John George Bartholomew's pocket diary, undated, 11; Mill (1910), 17.

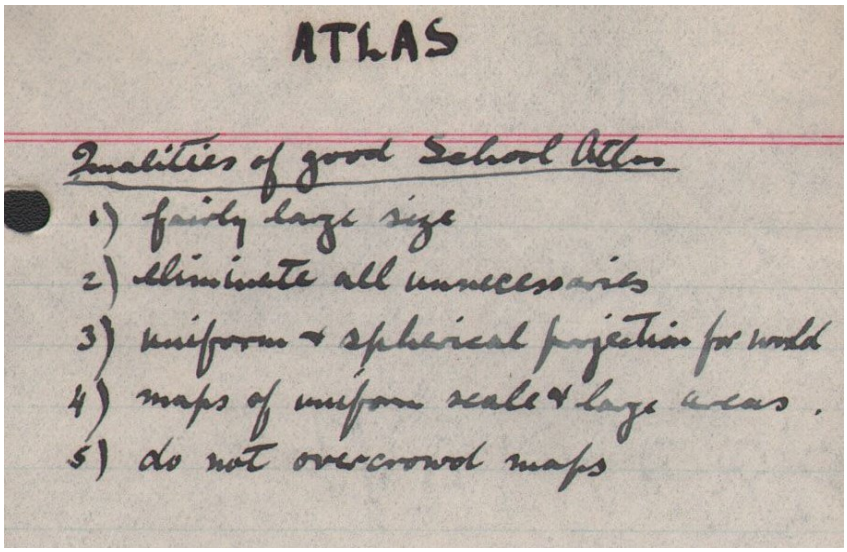


Figure 3.13. Bartholomew's pocket book entry (Source: Personal Collection of the Bartholomew family, John George Bartholomew's pocket diary, undated, 11.). Reproduced by kind permission of the Bartholomew family.

This attention to producing atlases useful for geographical education is echoed in the recurring trend in twentieth-century school atlases of references to progress in geographical education and to the 'new' or 'modern' character of geography. *Johnston's unrivalled school atlas* (1925), for example, boasted nine advantages and stated that 'what is required for teaching purposes has been the guiding thought in the whole preparation of this atlas. The maps contain everything that is essential for a good elementary school'.[57] In *Philips Elementary atlas of comparative geography* (1900), claims of its contributions to the advance of elementary geography were based on stylistic features and map content: 'the present atlas presents an earnest effort on the part of the publishers to further the teaching of elementary geography in accordance with the latest educational requirements'. The 'special features' that contributed to the educational value of the atlas reflected some aspects raised in the BAAS' 1915 report and in Bartholomew's personal notes. These included the prominence of physical features on the general maps; 'uniformity of Scale and comparison of area'; representations of political and historical geography;

[57] *Johnston's unrivalled school atlas* (1925, Edinburgh: W. & A. K. Johnston), i.

special care and attention to spelling; and the introduction, explaining the maps to follow.[58]

These statements in school atlases reflect what Mayhew calls the 'self-image' projected by a text and, I would argue, they represent the image geographers sought to promote of their subject—clear, distinct, and progressive.[59] The stylistic format and the epistemological content of these school atlases were, at least as their producers' claimed, attuned to recent progress in geographical education and to concerns over geography's clarity and meaning.[60] In school atlases these claims of assisting the campaign to improve geographical education were manifest, in part, in explanatory features such as introductory text, images and maps—which also made clear geography's scope and aims. Complex terms or mapping conventions (like scale) were also often described in detail in introductions and/or made easier to comprehend through images and diagrams, similarly improving the clarity of the knowledge presented in school atlases and contributing to a broader agenda among geographers to outline geography's purpose.[61]

Linked to desires to more clearly define geography's aims and to dispel any question over its value were matters of pedagogical method in geography, which were also informed and influenced by atlas style and content. The comparative method—what Maddrell refers to as a means of transmitting geographical knowledge—was manifest in school atlases through the arrangement and style of maps and, for her, comparison (in school textbooks) was 'at the heart of progressive teaching methods and efforts to make geography engaging and analytical'.[62] This seems to have been also the case in school atlases. In order to allow for comparison between the maps in *Philips' students' atlas for South Africa* a note on scale was inserted beside each entry in the contents page, the scale of each map increasing or

[58] *Elementary atlas of comparative geography* (1900, London: George Philip and Son), 2.
[59] Mayhew (1998), 389.
[60] See Chisholm (1908); Close (1911, 1912); Mackinder (1887, 1921); Mill (1892); Keltie (1897, 1915).
[61] This was the case in *Maskew Miller's national contour atlas for South African schools* (1913, Cape Town: T. Maskew Miller, 4–15), which presented a 'glossary of geographical terms', including the explanation of expressions used in mathematical, astronomical, physical, and political geography.
[62] Maddrell (1998), 81, 85. Maddrell also reveals that the comparative method in school textbooks was used before the late nineteenth century: for example, William Channing Woodbridge's employed this approach in *Rudiments of geography* (1829) (Maddrell, 1998, 84).

decreasing in tens of millions (from 10,000 to 20,000 and so on).[63] This explanatory technique was adopted in *Philip's new large print atlas for South Africa* (1926), *Large print atlas of comparative geography* (1903), *Shilling atlas of comparative geography* (1900), *London school board atlas* (1900), and the *London county council atlas* (1908): this allowed pupils to compare the same geographical phenomena across the world, or to compare political, physical and commercial maps of one location. Another comparative feature in these atlases was a statement on the base of the British Isles map revealing that readers were to use it 'as the unit of comparison throughout the atlas', a pedagogical device within which Britain literally became a standard of measure to allow pupils to compare the political, economic and cultural circumstances close at hand with those further afield (this known to unknown or regional approach in school atlases is considered in chapter 5).[64] Such 'methodological Eurocentrism' and, specifically, 'Anglo-centrism', thus relied on, and was facilitated by certain stylistic and prefatory features in school atlases.[65]

This comparative method was often appropriated in representations of the British Empire in school atlases and it facilitated the comparison of rudimentary geographical and political relations between Britain and its imperial territories, as well among these colonial places. These comparisons were also greatly informed, more broadly, by the creation of the 'other' in representations of place and people. Messages of this nature were also apparent in school textbooks at the time, characterised by imperial narratives about race, gender and citizenship (see chapter 2).[66] My focus here is how the comparative method and imperial discourses were interconnected and how this relationship was played out in school atlases through certain stylistic features and in specific knowledge content. For instance, one comparative method used in school atlases to represent the British Empire was maps of the world shaded pink (or red) for the parts of the globe under Britain's jurisdiction. This style of representation often necessitated no key to denote shading

[63] *Philips' students' atlas for South Africa* (1926, London: George Philip and Son).
[64] *Philips' new large print atlas for South Africa* (1926, London: George Philip and Son), *Philips' Large print atlas of comparative geography* (1903, London: George Philip and Son), *Shilling atlas of comparative geography* (1900, London: George Philip and Son), *London school board atlas* (1900, London: George Philip and Son), and the *London county council atlas* (1908, London: George Philip and Son), i and plate 6 in each copy.
[65] Maddrell (1998), 81.
[66] Maddrell (1996; 1998); Ploszajska (1998; 1999); Walford (1996; 2001).

since it was a recognised imperial narrative, evident, for example, in *Johnston's atlas for Australasian schools* (1910).[67] This style of map became a 'popular imperial icon incorporating the powerful image of lands encircling the earth, of the sun never setting on the Empire', also often used in geography textbooks.[68] Britain's comparative imperial status was also evident in school atlases through individual maps of its territories. Maps of Asia and Africa in the *Junior Relief Atlas*, therefore, followed the widespread practice of highlighting by colour (namely red) the states ruled by Britain.[69]

Britain's supremacy was also elucidated in representations of the world according to the territory belonging to other European and world powers, encouraging comparison between their distinct imperial positions. In such world maps, whilst Britain's territories maintained the colour pink, the colour used for other world powers varied widely. The world map in *Philips' junior relief atlas for use in Australian schools* presented territorial possessions as: British (pink); British mandates (pink); French (green); Dutch (yellow); US (red); Portuguese (purple); Spanish (green); and Italian (blue).[70] In Dent's *Canadian school atlas* (1922) the world map, consonant with Philips' atlases, illustrated British possessions in pink.[71] The remaining world powers represented in the map included: US (this time coloured dark green), French (purple), Dutch (brown), Portuguese (light green), Japanese (orange) and Chinese (lighter green)—revealing no standard practice in shading other Empires' territories in British atlases. This contrasts with what Scully suggests was a system in the colouring of other imperial powers, specifically Germany, in Bartholomew's popular maps, which changed due to political developments after World War One and was informed by British and German publisher-mapmakers' business and personal affiliations.[72]

Geography's pedagogy and episteme in school atlases were bound up in imperial narratives. Another comparative method used to demonstrate Britain's link with imperial territories consisted of insets of the British Isles on maps of colonial

[67] *Johnston's atlas for Australasian schools* (1910, Edinburgh: W. & A. K. Johnston), plate 3.
[68] Maddrell (1996), 380.
[69] *Philips' junior relief atlas*, (1926, London: George Philip and Son), plates 25 and 27.
[70] *Philips' junior relief atlas*, (1926), plate 1.
[71] *Canadian school atlas* (1922), plate 2.
[72] See Scully (2009).

locations. Insets of the UK on the same scale as maps of other parts of the Empire prompted students to compare the size of this imperial power to the territories it controlled. An inset of England and Wales on the same scale as the map of Canada in OUP's *Australasian school atlas* (1915) demonstrated the disparity between the British Empire, whose centre was in London, and whose comparatively small size was antithetical to the power it brandished over its often larger dominions.[73] This narrative of Britain's supremacy, however, was not fixed: it changed overtime. In *Philips' junior relief atlas* (1926), the map of the Pacific Ocean showing commercial highways between Australia, New Zealand, China, Japan, North America, Mexico, and South America contained an inset of the British Isles on the same scale as the main map, highlighting the latter's facilitation of these imperial and, significantly, global economic connections—such an international perspective a relatively new emphasis in atlases which had previously focused on Britain's colonial interdependencies.[74]

Representations of the Empire were also altered to respond to differences over space: the use of insets was ubiquitous both in atlases for pupils at 'home' and in those for pupils in its colonial territories but, as I show here, the content was altered according to pupils' location (see chapter 5). In *Philip's systematic atlas* (1895), England and Wales received maps showing railways, canals and other modes of commercial communication and the intended English readers were directed towards Yorkshire and South Lancashire's manufacturing districts through insets in the map of Northern England.[75] Following the same approach of relative geographical emphasis, *Johnston's Atlas for Australasian schools* highlighted commercial activities in Australasia. In this case, a map of Australia illustrated the railways and industries of the continent with an equivalent inset map of New Zealand representing its industrial activities.[76]

[73] *Australasian school atlas* (1915), plate 32.
[74] *Philips' junior relief atlas* (1926), plate 32.
[75] *Philip's systematic atlas* (1895), plates 9 and 10.
[76] *Johnston's atlas for Australasian schools* (1910), plate 17.

Conclusion

The theorising and cartographic representation of commercial and/or economic geography in school atlases was conflated with the view that the world and its people resulted from cause and effect relations between race, climate, natural resources and political circumstances. (The evolution of commercial and economic geography as specific fields within geography and the related style and content of school atlases is considered in more detail in chapter 4). Maps showing commercial activities or resource potential therefore rarely existed independent from maps of other phenomena. *Philips' shilling atlas of comparative geography* (1923) highlighted direct links between race, religion and commercial features through a map of the world showing interdependence between the 'commercial highways', presented on the main map, and the races and religions of 'mankind' evident in two inset maps, thus demonstrating to pupils the perceived natural order of the world's resources as a consequence of religion and race.[77] Pupils were told that physical geography was the dominant variable; race and religion were dependent on climate; and the level of commercial development of a specific part of the world was influenced by the interconnection between all three. What is important here, is that these interactions between climate, commerce and race were facilitated by, and they shaped, the order and layout of atlas maps; race and commercial maps often positioned adjacent to maps showing physical and political aspects of the same territory.

This chapter has demonstrated the utility of a mapmaker's business records in understanding the production of geographical knowledge through school atlases. Bartholomew's school atlas production followed a particular chronology that can be situated within its broader contextual narrative but the specific style and content atlases were made to adopt were also bound up in mapmaker-publishers' commercial concerns and in the progress of geography as a university and school subject. Attempts to understand the motivation behind a text's form and content have been made by both book historians and historians of the map. In this way, Chartier distinguishes between the mechanisms that structure the intentions of an 'author' and those practices and processes which are part of the convention of production by arguing that 'we need to make a distinction between two sets of mechanisms, the

[77] *Philips' shilling atlas of comparative geography* (1923), plate 3.

ones that are part of the strategies of writing and the author's intentions, and the ones that result from publishing decisions or the constraints of the print shop'; and Harley has indicated the interdependence between the influences shaping what he called the 'internal silences' in maps (technology and cartographic practice) and those which shaped expressions of 'external power' (i.e. political, social, cultural circumstances).[78]

This chapter has shown that what or who influenced production was more complicated than either Chartier's or Harley's statements suggest: school atlases were at the hands of different people from different professional and intellectual backgrounds whose motivations and practices—whether connected to external factors, internal motivations, or both—shaped the type and format of the knowledge disseminated. On their own, chronologies of atlas production offer only limited explanation of the who, what and where of atlas production. There needs to be detailed analysis of both the texts and the producers involved in production—and their interactions—in order to understand how and why certain stylistic features and specific cognitive content were adopted (or not).

This chapter has shown that school atlases are records of geography's particular episteme at a given time and in a specific place and they are also evidence of how a particular genre of mapbook was implicit in the moulding of a discipline and in consolidating in the minds of pupils particular ways of seeing. Through such an analysis, this chapter suggests that concerns with geography's professionalisation and institutionalisation went hand in hand with developments in the style and content of school atlases. The medium influenced the message transmitted: school atlases 'echoed the intellectual or discursive articulation of the argument in the visual articulation of the page' or as Mayhew puts it: 'the reworking of geography's disciplinary space was in part effected by [and I would argue affected] the reworking of geography's print spaces'.[79]

A material hermeneutics, however, is only one part of a study of school atlases. We must also conduct what McKenzie has called 'a sociology of texts', an approach that 'directs us to consider the human motives and interactions which texts

[78] Chartier (1992), 9; Harley (1988).
[79] Chartier (1992), 11; Mayhew (2007b), 486.

relied on at every stage of their production, transmission, and consumption'.[80] This sociology of school atlases is what I move to in the next chapter and is dependent, in part, on records of producers' correspondence and what they reveal 'of geography's private worlds, the private spaces in which geography was and is made before moving out, in printed, spoken or illustrated form, to become a public discourse'.[81] My findings in this chapter suggest that only in combining, as I do in the remaining chapters, diachronic records of atlas production with collections of school atlases; correspondence between producers; and biographical details about the individual mapmakers, publishers, geographers, and individual institutions involved, can we illuminate the opinions, motivations, processes, and circumstances shaping the communication of geographical knowledge through school atlases.

[80] McKenzie (1999), 15.
[81] Withers (2004), 41.

4

Negotiating atlas style and map content (*c.*1870–*c.*1930)

Introduction

In this chapter I am concerned with the production of school atlases in the light of the editorial notes and correspondence exchanged between different producers in their attempts to negotiate atlas style and map content. I respond, in part, to the view that 'too little consideration is given to the epistolary and inscriptive practices and, particularly, to the author–publisher relationships that lie within and behind printed works'.[1] The individuals and relationships involved in book production have been conceptualised in Darnton's communication circuit (see chapter 2, 22), but School atlas production challenges Darnton's strict categories of 'author', 'editor' and 'publisher' since it encompasses the process of engraving, not accounted for in Darnton's communications circuit. There is thus a new category, 'mapmaker', to be addressed.[2]

In map history there is recognition that the mapmaker is not the sole authority on a map's meaning and purpose. More recently, scholars have seen the editor as an important figure in the construction of atlases and have challenged the mapmaker's authorial presence, revealing in part the plurality of authorship (see chapter 2): in reality, the 'mapmaker' was always more than a 'single person'.[3] Historians of geography have also illuminated the 'redactive' relationships between writer, publisher and editor in the production of travel narratives.[4] In this chapter, I build upon the interactions involved in book and map production to uncover the particular people behind what McKenzie and others have termed the 'polyvocality' of the 'text'

[1] Withers and Keighren (2011), 561.
[2] Darnton (1982); also see Withers (2005) for a re-interpretation of Darnton's model in atlas history.
[3] Akerman (2005); Delano Smith (1996).
[4] Withers and Keighren (2011).

and to understand the negotiations upon which school atlas style and content depended.[5]

To do this, I illuminate communication between mapmakers, publishers, editors, geographers and other professionals involved in the production of a single atlas, and suggest that none alone could be designated 'author'. Interactions between different people complicates the category 'author' to an extent that we recognise that it belonged not to a single 'mapmaker', nor to an individual 'editor', nor even to a specific geographer, but that it was a contested, negotiated and constructed term that meant something different according to producers' particular agendas and motivations. The examples of atlas production raised in this chapter reveal that in each case authoring was a process bound up in the association between manuscript and print; the transformation of editorial notes and sketches into print was always subject to alteration and error. Awareness of this move from draft copy to published copy among producers, and the processes involved in negotiating this relationship, often stimulated questions of authorship which were bound up in producers' (sometimes conflicting) desires for professional and personal development; concerns about knowledge credibility; and their differing ideas about geographical knowledge.

I will explore these aspects of *authoring* by looking at four instances of atlas production. The first is the production of the *Australasian school atlas* (1915), which provides an example of how interactions between editors, mapmakers and publishers influenced atlas production, some individuals having a stronger authorial voice than others over style and content. My second example elucidates the apprehension of one 'author' in the production of the 'Classical school atlas' and his attempt to negotiate, in the space of the title page, his designation to the category 'editor'. In the third illustration of atlas production presented in this chapter, the nature of association between editor and mapmaker, manuscript and print, was distinct, which shaped the knowledge presented in the published atlas. The fourth instance of atlas production presented reiterates the authoring of an atlas by different individuals with distinct political and intellectual agendas and ways of seeing; it elucidates how 'authorship' was always a negotiable process, played out in the style and content of atlases.

[5] Both McKenzie (1986) and Mayhew (2007a) refer to the 'polyvocality' of texts in their analyses of book production and meaning.

Questions of authorship: 'editor' versus 'mapmaker'

In this section I consider the contested meanings of editor and mapmaker and the affinity these negotiations of 'authorship' had to individuals' desires for authorial integrity by looking specifically at the example of the *Australasian school atlas* (1915). This atlas was produced by the English publisher OUP—both its Melbourne and London branches; the Edinburgh mapmaker John Bartholomew and Son; and the historian and schools inspector Karl Reginald Cramp (English by birth but resident most of his life in Australia). The nature of communications between these interlocutors, namely OUP's role as mediator, is epitomised in a letter sent by OUP publisher V. H. Collins to Bartholomew's manager John George Bartholomew in 1914:

> I am sending you under separate cover the MS maps etc. of the proposed *Australasian atlas* and I enclose herewith copies of the following letters: one, from our Melbourne Branch to us 24 August; two, from Mr Cramp to our Melbourne Branch 1 August; and three, from Mr Cramp to our Melbourne Branch 10 of August.[6]

The communication within this and other letters provide insight into the role Cramp, Bartholomew and OUP publishers played in determining the type of geographical knowledge contained in the *Australasian school atlas.* Their interactions, more broadly, challenge the strict division between specific categories in Darton's communications circuit (see chapter 2, 22) of 'author', 'editor', 'publisher' and (although absent from this model) 'mapmaker'. It is to this that I turn next.

During production, Cramp—reviewing Bartholomew's draft copy of the *Australasian school atlas*—sent an emotive letter to OUP's Melbourne branch, expressing concerns over the maps in the special historical section: 'I am however very much disturbed over one particular about which I am now writing you . . . I am not at all satisfied with the title page of the atlas, which gives me credit merely for the introduction to the historical section and not for the historical section itself'.[7] The 'historical section' in the atlas consisted of sixteen plates explicating the 'discovery of Australia', including an image of the Dauphin chart of Australia (by the Portuguese in 1536), proposed to be the first map of the country; and maps showing

[6] NLS, Acc. 10222, Business Record 963, Incoming Correspondence, Collins to Bartholomew, 6 October 1914.
[7] NLS, Acc. 10222, Business Record 963, Incoming Correspondence, Cramp to OUP, Melbourne Branch, 1 August 1914.

the 'inland exploration' of Australia between 1788 and 1875. The atlas was appended by introductory text which included a six page 'guide to the historical maps' written by Cramp.[8] The contention Cramp raised in his letter to OUP concerned the authorship of the historical maps, given (so Cramp believed) in the title page to be a product of Bartholomew's own labour and skill. Countering this misrepresentation, Cramp reminded OUP (and, indirectly, Bartholomew) that 'the maps in the section referred to are, with two or three exceptions, quite my own original drawings, and the outcome of very protracted and careful study on my part'.[9] For Cramp, the title page was a denial of the 'true' author of the historical maps: 'I must say that your firm [Bartholomew] merely reproduced what I originally produced. I cannot consent for a moment to being deprived of my just recognition'. In Cramp's opinion, Bartholomew was merely a means to an end: 'it would be quite unreasonable to give the compositor the credit for the introduction because he set up the type'. To express his authority (over and above what Cramp believed to be the rudimentary part Bartholomew played) in the atlas, Cramp requested a shift in wording and cadence in the title page, demanding 'that the phrase "with an introduction *to* the Historical Section" be altered to read "with an introduction *and* the Historical Section", or more simply if you prefer "with the historical Section"'.[10]

Cramp's grievance, however, goes further back than this simple misplacing of words in the title page. It was a matter of the inconsistency between his editorial notes about how the title page should look and Bartholomew's implementation of these instructions in the printed text. Cramp's anxiety centred upon the processes necessary in the transformation of text between manuscript and print. In Cramp's mind, there should have been no question of the wording used in the title page since, in addition to Cramp's 'very protracted and careful study' in producing the historical maps, Cramp provided Bartholomew with a specific atlas plan: 'I [Cramp] am quite prepared to believe the error is altogether unintentional and merely due to a typographical slip. Yet you will pardon me for pointing out that as it now stands it is a departure from the wording ("with an Historical Section") which I sent home on

[8] *Australasian school atlas* (1915), plates 47–62, v–xi.
[9] NLS, Acc. 10222, Business Record 963, Incoming Correspondence, Cramp to OUP, Melbourne Branch, 1 August 1914.
[10] NLS, Acc. 10222, Business Record 963, Incoming Correspondence, Cramp to OUP, Melbourne Branch, 1 August 1914.

the title page'.[11] In terms of the historical maps, Cramp saw the exact copying of his notes as an inevitable process to be carried out by Bartholomew.

Bartholomew appeared, in rhetoric at least, to follow Cramp's attribution of roles, agreeing that his part in the atlas was to carefully copy Cramp's sketches and notes into map form: Bartholomew thus claimed that Cramp's request to review proofs of each historical map for the *Australasian school atlas* was unnecessary since it would cause delay—having to be sent to Australia, and since 'for the maps you may rely on us [Bartholomew] turning them out in suitable style without any further instruction on the subject'.[12] The roles of Cramp and Bartholomew in the production of the *Australasian school atlas* were apparently clear cut: Cramp as 'editor' and Bartholomew as 'mapmaker'.

It is in the space of the title page that we glimpse evidence that Bartholomew's and Cramp's roles were more contested, changes to draft copies of the title page during production indicating negotiations over authorship between OUP, Bartholomew and Cramp.[13] The title page of the 1915 edition, which read 'compiled and edited with an introduction *to* the historical section by K.R. Cramp' (Fig. 4.1), and which Cramp so vehemently rejected, was re-worded in the 1924 edition: 'with an introduction *and* the historical section'.[14] The published *Australasian school atlas* thus reflected, in part, in its style and content, the punctilious negotiations over these prefatory features and it reveals that, in the title page at least, all signs really did have meaning.[15]

[11] NLS, Acc. 10222, Business Record 963, Incoming Correspondence, Cramp to OUP, Melbourne Branch, 1 August 1914.
[12] NLS, Acc. 10222, Business Record 963, Incoming Correspondence, Bartholomew to Collins, 21 December 1914.
[13] NLS, Acc. 10222, Business Record 963, Incoming Correspondence, Two draft copies of title page for the *Australasian school atlas*, 18 April 1915 and undated.
[14] *Australasian school atlas* (1915), i; (1924), i.
[15] McKenzie, 1986.

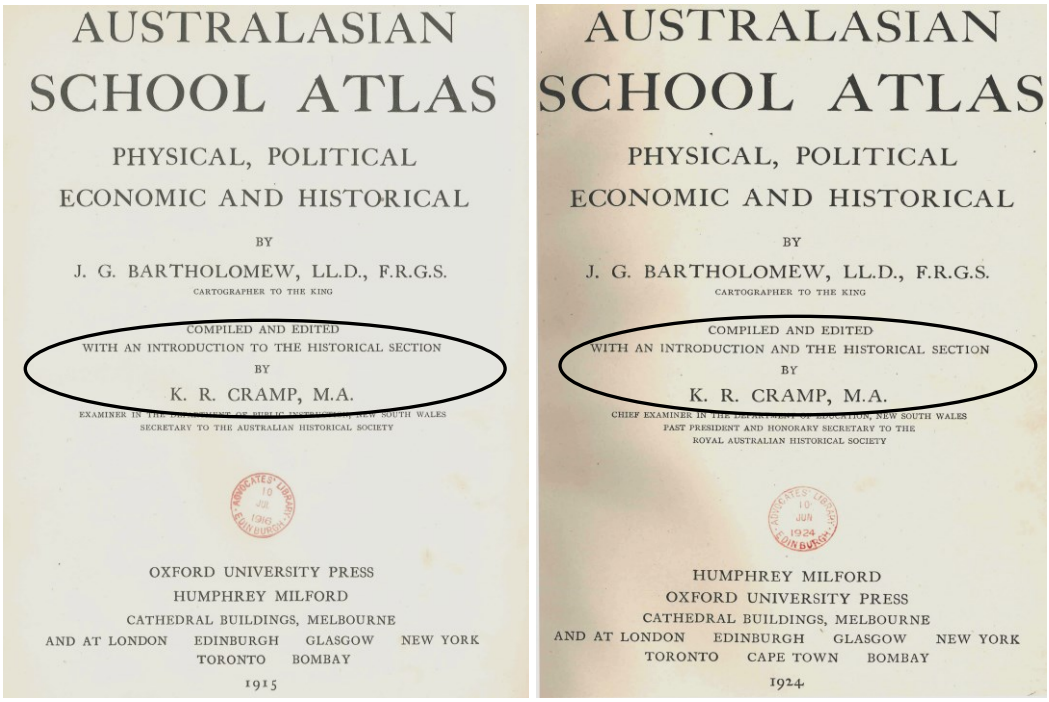
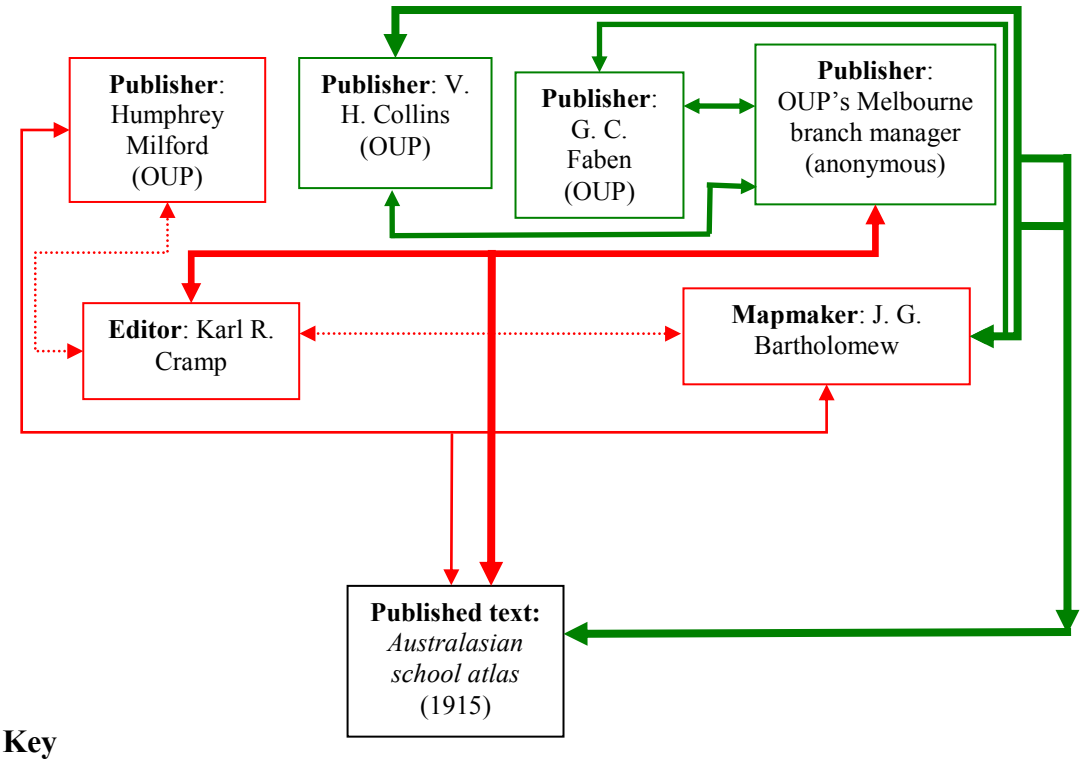


Figure 4.1. Title pages for the 1915 and 1924 editions of the *Australasian school atlas* (Source: *Australian school atlas*. (1915; 1924). London: George Philip and Son, i). Reproduced with permission of HarperCollins publishers.

Yet the iterative nature of the processes involved in the move from manuscript to print and the questions of authorship engendered remain largely concealed in the published *Australasian school atlas* until we uncover the people and communication behind the alterations in the title page. My concern here is that we thus need to recognise books 'as being more than simply their final printed content'.[16] In the light of this, figure 4.2 conceptualises the production of the *Australasian school atlas*. This is based on Darnton's communications circuit (see chapter 2, 22) but it provides a unique interpretation of book production—based on this specific instance. Looking at this diagram, we see that the published text conceals the fact that whilst Milford was the OUP publisher named in the title page, it was Collins and fellow OUP publisher G. C. Faben who had most contact with Bartholomew (evident in correspondence between them). Figure 4.2 also indicates that Cramp's most direct connection to the atlas' production was through the manager of OUP's Melbourne branch—anonymous in the atlas—having no direct

[16] Withers and Keighren (2011), 562.

contact with London publishers or Bartholomew. The meaning of 'editor' and 'mapmaker' were up for discussion and interpretation among producers, never being fixed to a single process or individual. More generally, figure 4.2 points to the fact that some of those involved in decisions over atlas style and content were absent from the printed text and so received no authorial credit, and it highlights the absence, in Darnton's categories (as Withers' indicates), of 'mapmaker' and (as Akerman alludes to) 'editor'.[17]



Key

Arrows:

Indicating the exchange of information. Their thickness reflects the type of exchange and the strength of association between individuals and between individuals and the published atlas.

Colours:

Contributors named in the printed text.

Other contributors evident in correspondence but unacknowledged in the published text.

Figure 4.2. Producers' negotiations in the production of the *Australasian school atlas* (1915).

[17] Akerman (2005); Withers (2005).

The 'value' in a name

Cramp's desire for authorial recognition in the *Australasian school atlas* contrasted with William Ross Hardie's request for anonymity with regards to his contribution to the 'Oxford classical school atlas', which was, in the end, never published by OUP. Hardie was a classical scholar, winning university distinctions throughout his education, and known for his literary volumes *Latin Prose Composition* (1908) and *Silvulae academicae* (1911).[18] During the period of his involvement in the production of the 'Classical school atlas' (1915–16) with OUP manager Milford and John George Bartholomew, Hardie was Professor of Humanity (Classics) at the University of Edinburgh. For Bartholomew and OUP, Hardie appeared to be an appropriate individual to edit the historical maps and introductory text for the atlas, and he indeed initially fully met their expectations. In 1915, Hardie returned proofs of the title page and contents list for the 'Classical school atlas' to Bartholomew signed 'WRH', noting that these contained 'changes agreed upon with a few further suggestions about details'.[19] His involvement in the atlas, however, was soon tainted by self-doubt over his qualification to provide trustworthy guidance on the geographical and historical knowledge contained, and he began to use strategies to weaken his authorial voice.[20] This is perhaps explained in part by Hardie's biographies or eulogies, which often describe him as painfully shy. Yet, as I suggest here, in his communication with Bartholomew it is clear that his disavowal of his adeptness to edit the 'Classical school atlas' was also related to Hardie's view of his own intellectual ability as a Classical scholar.[21] Hardie believed that there were others more suited to advise on the historical and geographical character of the proposed Oxford atlas, and my concern in this section is why.[22]

Hardie's anxiety over his contribution to the atlas was stimulated by Bartholomew and Milford's eagerness to have him on board. Both Bartholomew and Milford seem to have conflated Hardie's Classical training with expert knowledge of history, and thus geography. This link between history (classics) and geography

[18] Bailey (2004).
[19] NLS, Acc. 10222, Proof Maps, 71, Proofs of the title page and contents list of the 'Classical school atlas' sent by Hardie to Bartholomew, 12 November 1915.
[20] NLS, Acc. 10222, Proof Maps, 71, Hardie to Bartholomew, 3 August 1915.
[21] Bailey (2004) relays how Hardie was 'naturally taciturn' and would often sit silent among close friends.
[22] NLS, Acc. 10222, Proof Maps, 71, Hardie to Bartholomew, 9 January 1916.

echoed geographers' view of the interdependency of these two subjects. In his 1885 report, John Scott Keltie elucidated the importance of geography in the teaching of history, revealing that in Germany there is 'recognition of the indispensability of geography to a thorough understanding of history'. In fact, for Keltie, German historical atlases were apotheoses of how geography and history were intimately connected: geography was a way of explaining why history unfolded as it did 'for [as Keltie expressed] is not history, in its completest [sic] sense, the result, to a large extent of the interaction not only between man on man, but between man and his physical surroundings?'.[23]

In his 1887 paper, Halford Mackinder similarly illustrated this mutual reciprocity between the two subjects, whilst at the same time establishing geography's distinctive and scientific nature:

> The historian finds full occupation in the critical and comparative study of original documents. He has neither the time nor usually the turn of mind to scan *science* for himself with a view to selecting the facts and ideas which he requires. It is the function of the geographer to do this for him. On the other hand, the geographer must go to history for the verification of the relations which he suggests.[24]

This opinion that geographers were scientists assisting historians was an attempt by Mackinder to raise geography's status from its ill-defined state. This was consolidated by A. W. Andrews in 1897: drawing on what he knew about German geography (probably facilitated in part by Keltie's 1885 report), Andrews suggested that in order to 'obtain for geography in English education the honoured and important position that it holds on the continent' the teaching of history in schools should be laced with geographical knowledge.[25] Sharing Keltie's enthusiasm for 'historical atlases', Andrews indicated that many of the existing historical atlases were inadequate being 'almost entirely topographical; that is to say, they deal with the distribution of names and the changes of political boundaries', rather than the causal relation between geography and history.[26]

Whether the map content of the 'Oxford classical school atlas' was intended to represent this interdependence between history and geography is unclear since the

[23] Keltie (1885), 19–20.
[24] Mackinder (1887), 154.
[25] Andrews (1897), 427.
[26] Andrews (1897), 428.

atlas was neither finished nor published. A manuscript copy of the contents page reveals that it was to contain a number of orographical maps of the Ancient world (including the Grecian and Persian Empires) alongside political maps of the same.[27] Maps showing racial and economic features—suggesting 'geographical control', which Keltie, Macinder and Andrews advocated—were also to be included. More, however, can be gleaned from Hardie's admission of his own struggle, communicated to Bartholomew, to understand geography's part in the 'Classical atlas'. It is evident that Hardie himself recognised that an historical atlas required some geographical insight and his attempt to grasp the necessary historical and geographical content of the atlas led him to other historical atlases, revealing once again the hybrid nature of atlases (see chapter 3): he informed Bartholomew that he 'went to the University Library today, but it is very ill-provided with ancient atlases and I did not see very much. The only atlas that I have myself is not Kispert, but the Spruner-Sieglin (published by Perthes, Gotha, about 20 years ago)'.[28] Hardie then proposed that he 'come to the [Bartholomew's Geographical] Institute, I think, next Saturday or next Monday to look at atlases you have or the materials for the proposed atlas' (a trip that went unrealised).

Hardie's confusion over the atlas, describing its editing as 'a perplexing business', was centred on the accuracy of names and their correct positioning in maps, but such a focus on toponymy Andrews had earlier scrutinized for its limited attention to geographical influence: Hardie told Bartholomew that 'it is difficult to know where to stop if one begins scrutinizing particular points where there is possibility of doubts . . . I find that . . . Pliny has Oceansus Britannicus and O'Gallicus for different parts of the outer sea. Pliny also makes Melosend Thera spoarades'.[29] Hardie also relayed to Bartholomew his frustration over the order of maps in the 'Classical atlas', failing, it seems, to grasp the relation between 'history' and 'geography' that concerned geographers:

> I cannot say that I quite like it [map order]. I still feel that both Alexander's Empire and the Roman Empire are out of place. If I had a free hand, I should put 13 (Thacia etc.) after 7 [Persian Empire], and 9 [Grecian and Phoenician colonies] after 12 [Athenae Piraeus]. Similarly, I think that the maps of the

[27] NLS, Acc. 10222, Proof Maps, 71, Proofs of title page and contents page, 12 November 1915.
[28] NLS, Acc. 10222, Proof Maps, 71, Hardie to Bartholomew, 1 November 1915.
[29] NLS, Acc. 10222, Proof Maps, 71, Hardie to Bartholomew, 17 November 1915; Andrews (1897).

> Roman empire as a whole should not come between Gallia etc. and Britain, but immediately after 17 [Latium, Campania].[30]

Hardie's fixation on decisions about place names (or 'language') and map order fanned his conviction that the necessity of geography's position in the historical atlas reduced him to a position of ignorance, unable (and perhaps unwilling) to engage with the dominant historical-geographical approach propounded by many geographers at the time. Hardie considered that since it was 'the teaching of history, not of language and literature [the two latter with which he was concerned in his Classical studies], that involves geography in the greatest degree', he must abdicate his authorial function in the 'Classical school atlas'.[31] It seems, I suggest, that geography's relation to history was something Hardie had little knowledge of and/or interest in, but it is also evident that in seeking to connect 'history' and 'geography' in the 'Classical school atlas' Bartholomew, Milford and Hardie were at odds as to what each of these 'fields'—geography, history, Classics—did and how they were relatable in a school atlas.

To avoid further confusion Hardie, struggling with his role in the atlas, suggested A. F. Giles would be a suitable replacement since he was lecturer in ancient history at Edinburgh and 'is much more concerned with geography in his teaching than I am'.[32] Hardie went on to suggest that Giles replace him on the title page and that he [Hardie] from then on simply 'hear about any questions of principle, or participation difficulties, and to try to give an opinion on them'. Lack of confidence in the 'value' of his own name or what could be interpreted as authorial self-effacement prompted Hardie to demand that the title page showed less of his involvement in the atlas. In Hardie's opinion, the placing of his name on the title page as 'editor', a suggestion of Milford's, would be a feature of deception: 'I should seem to be posing as an expert in geography, which I am not, and it would be rather a false position'.[33] His own suggestion for the title page was: '"prepared and edited by J. G. B. and under that (preferably in smaller type) with the cooperation of, or with

[30] NLS, Acc. 10222, Proof Maps, 71, Hardie to Bartholomew, 25 November 1915.
[31] NLS, Acc. 10222, Proof Maps, 71, Hardie to Bartholomew, 9 January 1916.
[32] NLS, Acc. 10222, Proof Maps, 71, Hardie to Bartholomew, 3 August 1915.
[33] NLS, Acc. 10222, Proof Maps, 71, Hardie to Bartholomew, 26 October 1915.

the advice and cooperation of, W. R. H"' (suggesting that the style should mimic 'George Adam Smith's *Historical atlas*').[34]

The title page Bartholomew subsequently proposed and which was accepted by Milford read: 'prepared with the advice and co-operation of Professor W. R. Hardie . . . Late fellow of Balliol College, Oxford. [And on another line] By J. G. Bartholomew'. As Milford put it, Bartholomew was unable to 'persuade the diffident professor to accept this version'.[35] Rather, Hardie reiterated his concern, seeing the large format of his name on the title page, whether 'editor' or not, as giving the atlas a farcical character:

> The size and conspicuousness of the type resuscitates the difficulty which seemed to be removed, or mitigated, by avoiding the word 'editor' or 'edited by'. I am sorry to be dissatisfied still, but I do still rather feel the position to be unsound or unreal. People who look at the title-page will assume that the 'advice' is expert advice, when it is not. I have felt this vaguely all along and it seems to be impossible to escape from the feeling.[36]

The 'editor' of the 'Classical atlas' was for Hardie an expert in geography, which he believed he was not. Authorship was, in part, a process of credibility and veracity but there was disagreement over who guaranteed these features of production. For Milford and Bartholomew, it was Hardie's name that added to the atlas something quite distinct from 'unsound or unreal'.

For Milford, Hardie's part in the atlas was less a source of geographical and historical knowledge—a perception by Hardie which led to his anxiety—than a strategic decision to ensure the atlas appeared appropriately informed and credible. According to Milford, the replacement of Hardie with Giles' name would thus be in vain since Giles' name was of little 'value' and so would be associated by readers with neither credibility nor veracity. In fact, Milford suggested other, better known, names as substitutes to Hardie, including historian John Linton Myres (but it was believed he was involved in the war) or Oxford historian Arnold Joseph Toynbee, an erstwhile colleague of Hardie's (but he was not available 'on the spot').[37] Milford's judgement of a text's integrity was informed by his perception of readers' familiarity with the chosen historian or 'author'. This echoes Johns' finding in his study of

[34] NLS, Acc. 10222, Proof Maps, 71, Hardie to Bartholomew, 3 August 1915.
[35] NLS, Acc. 10222, Proof Maps, 71, Milford to Bartholomew, 29 October 1915.
[36] NLS, Acc. 10222, Proof Maps, 71, Hardie to Bartholomew, 15 Nov 1915.
[37] NLS, Acc. 10222, Proof Maps, 71, Milford to Bartholomew, 15 December 1915; Milford to Bartholomew, 3 January 1916.

London book production in which standards of credibility were often based on perceptions of an individual's propriety: a printer or bookseller who was seen as good in character would increase readers' trust in books that came from their trading house, and thus textual authority was often negotiated and contested, and it resided in and depended on, assessments of individual credibility.[38]

Like Milford, Bartholomew sought authorial credibility in the individual chosen to replace Hardie, anxious to have some 'expert' in classical history or geography involved in the production of the 'Classical school atlas'—a role both Milford and Bartholomew believed Hardie could fulfil *ab initio*. Bartholomew's motivations, however, were not so superficial as Milford's since, whilst he recognised the limited effect of Giles' name in guaranteeing readers' trust, he was of the opinion that the atlas required Giles' advice in order to remove errors in content: 'although 'Giles' name is not generally known … he knows the subject, and I think it would be well to have the proofs revised by him or someone else with special knowledge'.[39] The resolution agreed by Milford was to pay Giles ten guineas to review the atlas and have his name in a 'note' in the atlas but requesting that it was excluded from the title page. Giles' expertise was worth something to Milford but his name was not.

Despite his removal from the project, Hardie continued to oscillate between editor and advisor. As Withers and Keighren have said of the publisher John Murray in his 'editing' of travel narratives, Hardie's 'role . . . was hybrid, even contradictory'.[40] Hardie insisted that his desire for anonymity was not a clandestine attempt of disassociating himself from what might become a failed atlas, relaying to Bartholomew that 'I think the chance is very small that even an expert would find anything seriously wrong [with the atlas]'.[41] The circumstance was interpreted quite differently by Milford who described Hardie as 'a tiresome creature' and informed Bartholomew that 'he is playing the same kind of game with a book of his own which we are supposed to be printing at Oxford'.[42] Five months after Hardie suggested a new 'editor' be found, he informed Bartholomew about some new

[38] Johns (1998); Withers and Keighren (2011), 564.
[39] NLS, Acc. 10222, Proof Maps, 71, Bartholomew to Milford, undated.
[40] Withers and Keighren (2011), 566.
[41] NLS, Acc. 10222, Proof Maps, 71, Hardie to Bartholomew, 12 December 1915.
[42] NLS, Acc. 10222, Proof Maps, 71, Milford to Bartholomew, 15 December 1915.

research that would update the atlas maps while at the same time stating: 'I hope Mr Milford has found a suitable *editor* in Oxford for the atlas'.[43] The irony of Hardie's letter, providing editorial advice but continuing to relinquish his own official role in the atlas, epitomises the confusion among Milford, Bartholomew and Hardie over the meaning of 'classical history', 'ancient history' and 'geography', and over their different motivations of authorial integrity and the veracity of atlas content.

This illustration tells us something about the nature of geography generally since the abstruse nature of what was asked of Hardie by Bartholomew and Milford (the details of which are unclear) was probably confounded by the fact that there was a lack of consensus among geographers about the specific meaning of geography (as a distinct subject), and of its relationship to history. This is evident in Bartholomew and Milford's misunderstanding over the subject of 'classics' (or classical history), which they assumed dealt with geography and history together, and by Hardie's inability (or refusal) to act as a historian and geographer in the atlas. The relationship between history and geography was, among geographers and historians, contested and multifarious. In 1897, Chisholm thus provided a caveat to Andrews' insistence on the teaching of geography and history together:

> While it is very important that in the teaching of history, its relations to geography, the effect geography has had upon it, should be clearly brought out, there may be a tendency to go a little too far, and to give, especially young pupils, a feeling that all history may be explained as a deduction from physical features. Of course, that is not the case, as Andrews is very well aware. At all times political and economic, as well as other conditions must be taken into account.[44]

Chisholm's less deterministic approach to geography's influence on history illustrates a divergence from a simple interpretation of history in relation to geography. Hardie, Bartholomew and Milford's limited ability to define what an historical and geographical school atlas should look like and disagreement among geographers generally over this issue further complicates attempts in the history of geography to create a lineage, or pedigree, of geography's development from 'then' to 'now'.[45]

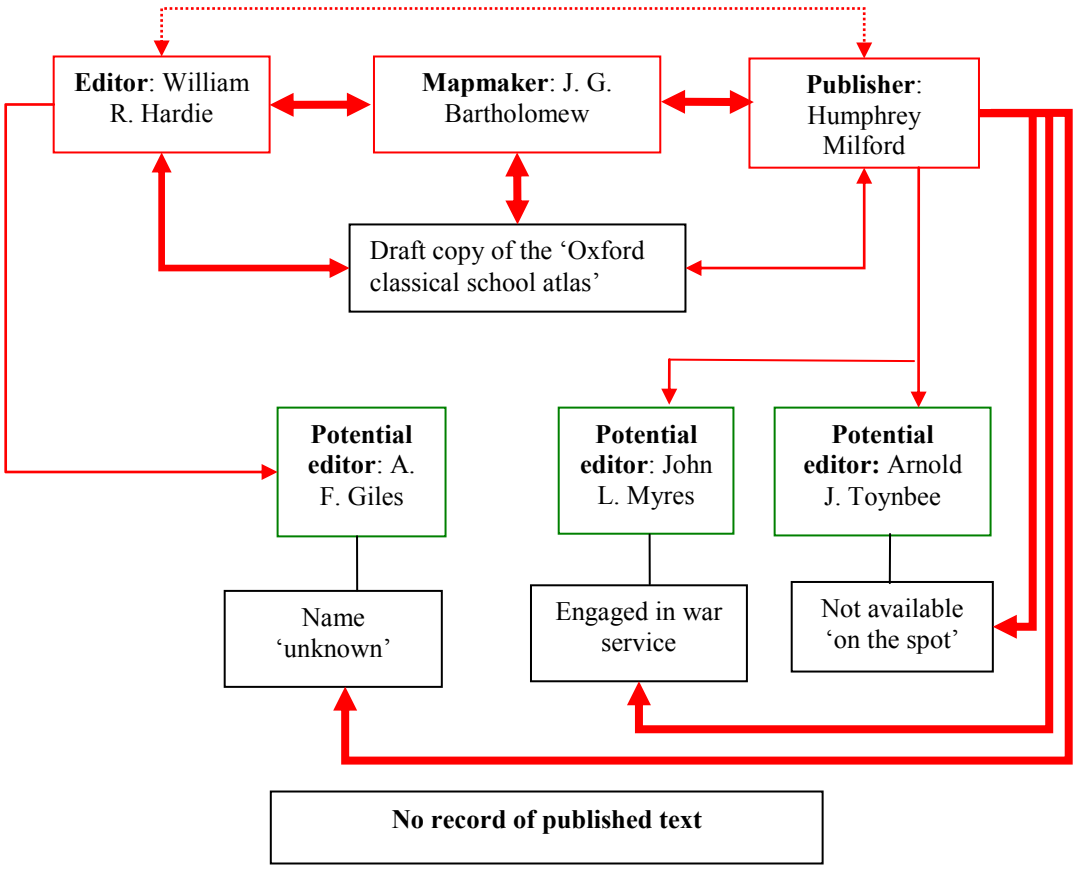
[43] NLS, Acc. 10222, Proof Maps, 71, Hardie to Bartholomew, 3 January 1916.
[44] Andrews *et al* (1897), 338.
[45] See Mayhew (2011), 23–49.

Negotiating atlas style and map content

Complexity in the production of the 'Classical school atlas', however, came not only from an inability to define clearly what a historical atlas should contain but it was also influenced by who should be given the authority to make decisions on knowledge content. Hardie's desire to be omitted from the title page despite his perpetual contributions reveals his apprehension at being deemed the 'editor' and highlights the limited meaning of categories which we often associate with the names appearing on the printed text, such as 'editor', 'author' and 'mapmaker' (Fig. 4.3). Figure 4.3 once again shows how the published atlas often obscured the associations and practices behind it.

As with Cramp's insistence on authorial recognition in the title page of the *Australasian school atlas*, which led to several different title versions, Hardie's authorial disavowal was evident in the words and phrases used in the title page. At the same time, the title page also concealed the negotiations and many of the interlocutors involved in 'authoring' the atlas. It is, as I show here, not sufficient to declare, as Barthes' does, that the author is dead, or to suggest that the text itself is where meaning is determined: in Foucault's words 'it is not enough to declare that we should do without the writer (the 'author') and study the work itself. The word "work" and the unity that it designates are probably as problematic as the status of the author's individuality'.[46] By uncovering the communications behind the *Australasian school atlas* and the 'Classical school atlas' it is possible to study both the 'author', which was a function of a number of different individuals, and the book, whose style and content was influenced by their associations. To understand atlas (book) production we must recognise, in the words of McKenzie, that 'an author disperses into his [sic] collaborators, those who produced his [sic] texts and their meanings', and that the text is both a reflection of these individuals and a tool in their negotiations.[47]

[46] Barthes (2002); Iser (2002); Foucault (1989), 282.
[47] McKenzie (1986), 18.



Key
Arrows:
Indicating the exchange of information. Their thickness reflects the type of exchange and the strength of association between individuals and between individuals and the atlas.
Colours:
Initial contributors to be named in the published text.
Suggested replacements for Hardie after his attempt to resign as 'editor'.

Figure 4.3. The 'value' of a name in the production of the 'Oxford classical school atlas'. See also Darnton's communications circuit (chapter 2, 22).

Negotiating the transition from manuscript to print in two historical atlases

Shedding light on similar questions about authorship proves more difficult for the *Historical and modern atlas of the British Empire* (1905) since little correspondence exists between its producers. According to the printed text, the atlas was 'specially prepared for students by [English historian] C. Grant Robertson, fellow of All Souls

College, Oxford and J. G. Bartholomew' and was published by Methuen & Co.[48] Despite their anonymity, the extant editorial notes in the 'dummy' copy of the *Historical and modern atlas* exist as a story of how maps were transformed from manuscript to print or, more true to this example and to the production of Bartholomew's school atlases generally—which were largely the result of processes of reproduction and recycling of already published material (see chapter 3)—the notes are an illustration of how maps were changed from printed draft to published text.

In the draft map of the 'Indian Empire in 1905' for the *Historical and modern atlas*, a handwritten note (in red) in the bottom margin stated that 'the new provinces of Bengal and eastern Bengal and Assam were formed in 1905'.[49] This note received a tick (in pencil) in this dummy copy and the correction was printed (in red) in the published map (Fig. 4.4).[50] Spelling errors were also corrected in the blueprint of this map: the incorrect spelling of 'Landsdowne' was changed by a stroke through the first 'd' with red pen.[51] A tick beside this correction (in pencil) and the inclusion of the corrected name in the published map reveals cooperation between the anonymous individual, or individuals, making these editorial alterations and those engraving the map (Fig. 4.5).[52] Similar agreement between edited copy and published text was present in plate 32 showing 'India in 1764'. A pencil annotation in the proof map highlighted a small section of Bombay's coast to be coloured 'red'—a feature again realised in the published map (Fig. 4.6).[53]

[48] *Historical and modern atlas of the British Empire* (1905), i.
[49] NLS, Acc. 10222, Proof Maps, 71, Edited copy of 'Indian Empire in 1905', plate 35.
[50] *Historical and modern atlas of the British Empire* (1905), plate 35.
[51] NLS, Acc. 10222, Proof Maps, 71, Edited copy of the map of the map of the Indian Empire, plate 35.
[52] *Historical and modern atlas of the British Empire* (1905), plate 34.
[53] NLS, Acc. 10222, Proof Maps, 71, Edited copy of 'Indian in 1764', plate 32; *Historical and modern atlas of the British Empire* (1905), plate 32.

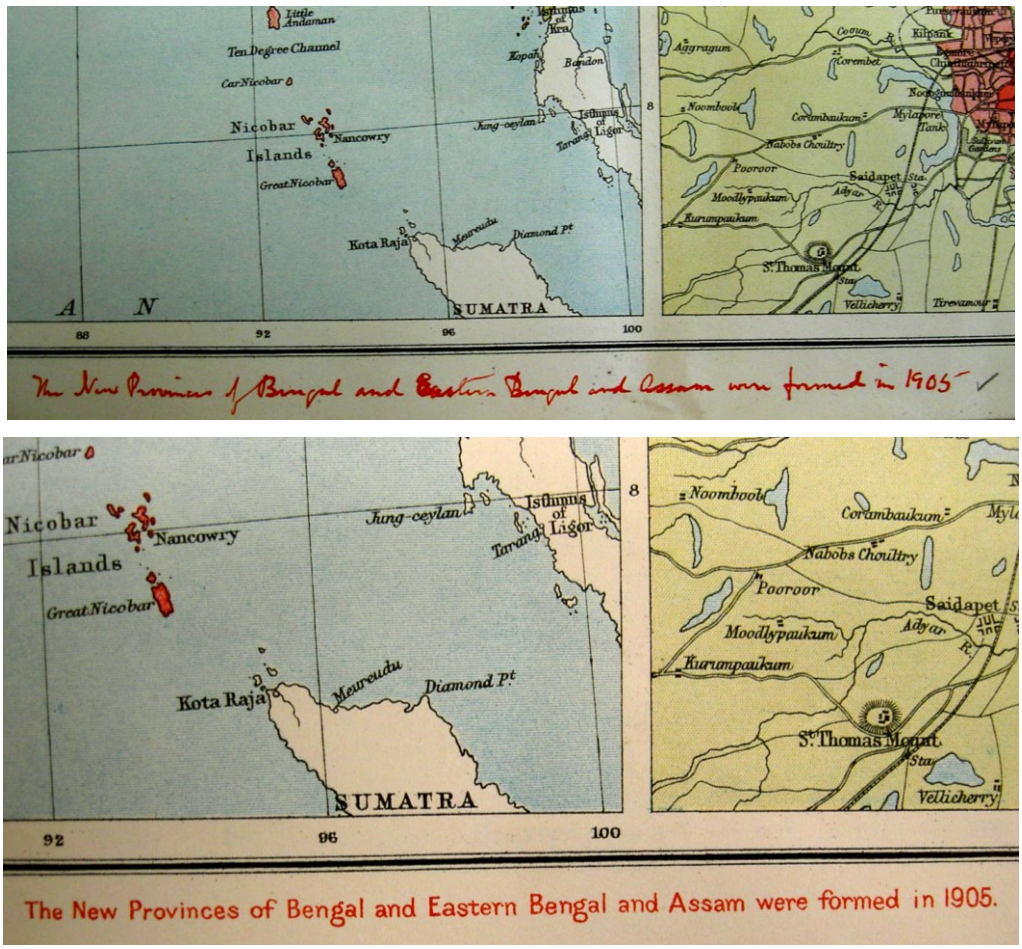


Figure 4.4. Marginalia on the map of the 'Indian Empire in 1905' (Source: NLS, Acc. 10222, Proof Maps, 71, Manuscript copy of the map of the 'Indian Empire in 1905', plate 35; *Historical and modern atlas of the British Empire,* 1905, plate 35). Reproduced with permission of HarperCollins publishers.

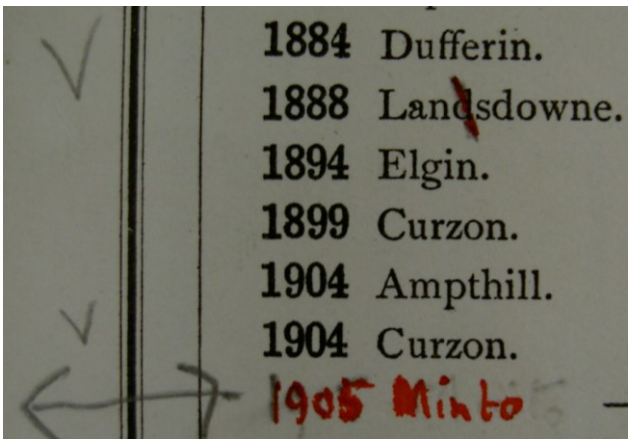


Figure 4.5. Corrections on the map of the Indian Empire (Source: NLS, Acc. 10222, Proof Maps, 71, Manuscript copy of the map of the 'Indian Empire in 1905', plate 35). Reproduced with permission of HarperCollins publishers.

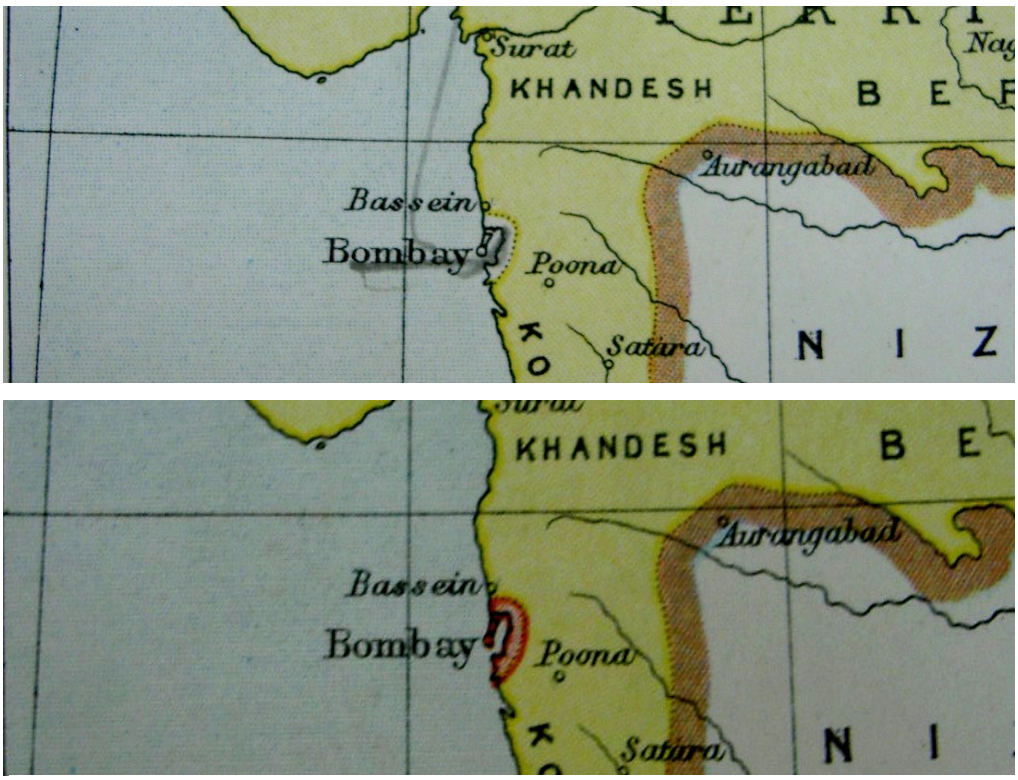


Figure 4.6. Colour corrections on manuscript maps. The line in pencil pointing to the coast of Bombay in the draft map (top) was attached to a note in the top margin denoting its proper colouring as 'red', reproduced in the published atlas map (bottom) (Source: NLS, Acc. 10222, Proof Maps, 71, Draft copy of the map of 'India in 1764', plate 32; *Historical and modern atlas of the British Empire,* 1905, plate 32). Reproduced with permission of Harper–Collins publishers.

In the limited correspondence that exists from Robertson to Bartholomew regarding this atlas, Robertson described himself as John George Bartholomew's 'junior co-editor', suggesting an amicable association between the two contributors.[54] But Bartholomew and Robertson's interaction is more easily interpreted in the production of a second school atlas entitled the *Historical atlas of modern Europe from 1789 to 1914*, published by OUP in 1915. According to the printed atlas, Robertson's role was writer of 'an historical and explanatory text'.[55] As I show here, however, the production records of the atlas, reveal that Robertson's contribution was much greater than the title page suggested and included providing 'historical material' for the maps; ordering atlas plates; finalising a contents list; and making

[54] NLS, Acc. 10222, Business Record 968, Incoming correspondence, Robertson to Bartholomew, 15 July 1905.
[55] *Historical atlas of modern Europe* (1915), i.

sketches and extensive editorial notes for each map: 'I (Robertson) will send you (Bartholomew) in a day or two a good deal more detailed information about the maps from my point of view: giving you details and a worked out scheme on which you can make your calculations and into which any necessary modifications can be in time decided'.[56] The title page once again obscured the full nature of atlas production, just as it had done in the *Australasian school atlas* and in the 'Classical school atlas'.

The modest acknowledgement of Robertson in the title page contrasted with his extensive notes and drawings sent to Bartholomew. At the same time, Robertson's authorial modesty in the tile page reflected his desire for the atlas to be a joint project between himself and Bartholomew. Unlike Cramp in the production of the *Australasian school atlas*, Robertson saw Bartholomew as the main decision maker regarding colour and other stylistic features. The interactions between Bartholomew and Robertson in producing this atlas were thus unique, owing to the limited input from OUP publishers and the, concomitantly, more direct communication between 'mapmaker' (Bartholomew) and 'editor' (Robertston). For Robertson, Bartholomew's role was more than the copying of sketches and notes as Cramp saw it. Robertson assured Bartholomew that his own instructions for each plate were 'only material for you to handle, limit or extend as you know cost will let you'.[57] Robertson also expressed great alacrity to give Bartholomew freedom in decisions on colour and place names, encouraging Bartholomew to 'feel about the choice of colours, as about the insertions of place names, that I indicate what may be done, but that you will decide what can be done—and then just do it.[58]

As with the *Australasian school atlas*, there was a set 'scheme' and, perhaps inspired by his recent experience with Cramp, Bartholomew sought perpetual recognition from Robertson that he was meeting it.[59] Whilst having more freedom than Cramp allowed, Bartholomew believe that his role in the *Historical atlas* was to

[56] NLS, Acc. 10222, Business Record 968, Incoming Correspondence, Robertson to Bartholomew, 7 March 1915.
[57] NLS, Acc. 10222, Business Record 968, Incoming Correspondence, Robertson to Bartholomew, 12 April 1915.
[58] NLS, Acc. 10222, Business Record 968, Incoming Correspondence, Robertson to Bartholomew, 15 April 1915.
[59] NLS, Acc. 10222, Business Record 968, Incoming Correspondence, Bartholomew to Robertson, undated.

copy Robertson's instructions and, concomitantly, Bartholomew expected Robertson to provide assurance that the work was, to date, satisfactory. Such expectations were not only in Bartholomew's mind, and the initial harmonious relationship between him and Robertson soon became tainted when Robertson expressed dislike for the two Balkan maps to be included in the *Historical atlas* due to erroneous dates and misleading titles.[60] According to Robertson, map content, namely historical information, was to be informed largely by his notes and his subsequent editing of proof maps. Persiflage in the earlier letters shifted somewhat in the light of Bartholomew's indication that the flawed Balkan maps had already been passed for engraving and were sent to Robertson only as a reference—ironic given Bartholomew's earlier unsuccessful attempt to invoke Robertson's editorial eye. The solution for Robertson, who accepted the inability to alter the maps, was the insertion of an 'erratum' in the atlas noting the particular errors.[61] This admission of error was, perhaps naturally, not included in the published atlas. Despite this, one month later Robertson positively reminisced about his interaction with Bartholomew, confessing that 'it is a pleasure to put my thoughts frankly before you (Bartholomew) for you grasp my point and succeed in giving effect to it.[62]

Robertson's statement, given the reality of his experience with Bartholomew, marks important features in the production process. Robertson and Bartholomew's association was informed by Robertson's ability to trust Bartholomew's decisions, whether they reflected his instructions or not. In spite of Bartholomew's eagerness to copy Robertson's notes, the transformation of knowledge from manuscript to print was subject to error. The nature of authorship—its collaborative qualities—meant that the movement from manuscript to print, printed draft to published atlas, was never smooth, but was always subject to deviation and error. In all of the atlases presented so far this disassociation between draft and published atlas was a result not simply of overt divergence from set plans by Bartholomew, nor necessarily due to the desire of Milford or another publisher to discombobulate an over zealous

[60] NLS, Acc. 10222, Business Record 968, Incoming Correspondence, Robertson to Bartholomew, 12 June 1915.
[61] NLS, Acc. 10222, Business Record 968, Incoming Correspondence, Robertson to Bartholomew, 15 June 1915.
[62] NLS, Acc. 10222, Business Record 968, Incoming Correspondence, Robertson to Bartholomew, 17 July 1915.

geographer or historian, but atlas production was by its very nature subject to incongruity between manuscript and print, editing and engraving.

Even Cramp recognised the implicit fallibility of Bartholomew's copying of his strict notes for the *Australasian school atlas*, although to him this was an unacceptable corollary of atlas production. In the *Australasian school atlas*, the title page was a site of contestation and negotiation over Cramp's overt authorial recognition in the atlas.[63] The title page was similarly strategic in Hardie's case, believing the type and order of words should match his competence (or lack of) in geography and history. For Robertson, what was important was less the nature of his recognition in the title page than the veracity of the historical and geographical knowledge presented. 'Author', therefore, had different meanings for different people. It was not an uncontested acquisition or attribution belonging to a single individual, but it was also not a role everyone wanted. In atlas production 'author' was manifest both in the mapmaking and editing of maps. 'Author' was a process negotiated between publishers, mapmakers, geographers, historians and others, some of whom wanted the privilege, some who considered their name misrepresentative in such a role, others who were concerned to attach 'value' to the printed text through another's name, and still others who saw 'author' as a matter of constant delegation between themselves and another. What I have illustrated here is that editorial notes and correspondence between atlas producers thus elucidate the variety of different individuals and motives embodied in the construction of 'author'.

Negotiating atlas style and map content in the *School economic atlas* (1910)

Similar questions of authorship in the production of the *School economic atlas* (1910) were greatly informed by the type of geographical knowledge represented in its maps and prefatory features. The printed text revealed contributions from John George Bartholomew, OUP and Lionel William Lyde, who was at that time Professor of Economic Geography at University College London (UCL). The atlas was published with differing titles and in six editions from 1910–28, including the *School economic atlas, Oxford economic atlas* and the *Atlas of economic geography*. Other contributors acknowledged in print included OUP manager Henry Frowde—

[63] NLS, Acc. 10222, Business Record 963, Incoming Correspondence, Cramp to OUP, Melbourne Branch, 1 August 1914.

presented as 'publisher to the University of Oxford' in the 1910 edition.[64] Frowde was at that time manager of OUP's London branch and was succeeded by Humphrey Milford, whose name appeared in succeeding editions.

The published atlas, however, failed to acknowledge V. H. Collins, another OUP publisher who, to judge from correspondence, was involved in the re-printing, re-editing and re-production of the atlas to form later editions.[65] The involvement of Bartholomew was also more complicated than the text suggested. After John George Bartholomew died in 1920, his son John Ian Bartholomew took over the firm but the 1921 edition of the atlas still had John George's name on the cover and title page. Successive editions continued this practice but with the insertion of 'John (Ian) Bartholomew' as editor.[66] In the 1928 edition, re-named the *Atlas of economic geography*, John Ian suggested to Milford's editor E. C. Parnwell—the latter also unrecognised in the printed text—that the atlas might 'look more up-to-date if we reduced the size of type on the title-page "By J. G. Bartholomew, & C." and inserted underneath this "Revised by John Bartholomew"?'[67] As in the *Australasian school atlas* and the 'Classical school atlas', the title page of the *School economic atlas* was a site where authorship was often negotiated, challenged and constructed through changes to content and style.

In addition to Bartholomew, Milford and Lyde, acknowledged in the 1928 edition of the atlas were two female contributors: in a note from Lyde in the atlas attention was paid to 'all the burden of the work behind the new black–and–white maps [which] has been borne by Miss Shackleton, and I [Lyde] have to thank Miss Wilford for the mass of the actual work of draughtsmanship' (Fig. 4.7). Margaret R. Shackleton also appeared on the title page alongside the other, male, contributors and was referenced for her 'co-operation' in the 'revision and enlargement' of the texts and for her position as 'a senior assistant in the geography department at University

[64] *School economic atlas* (1910), i.
[65] Outgoing correspondence in the Bartholomew Archive provides evidence of communications between the Bartholomew firm, including John George (and later John Ian) and Director Graham Robinson, and Collins over the reprinting of the *School economic atlas* (NLS, Acc. 10222, Business Record 785, 787, 790 and 796, Outgoing Correspondence).
[66] *School economic atlas* (1921); *Atlas of economic geography* (1914).
[67] NLS, Acc. 10222, Business Record 796, Outgoing Correspondence, Bartholomew to Parnwell, 28 October 1924.

College, London'.[68] The life and work of Shackleton has been elucidated in Maddrell's recent biographical work on the, often hidden and unrecognised, lives of female geographers between the late nineteenth and late twentieth centuries.[69] Shackleton's contributions to geography included her association with Lyde, becoming his assistant at University College, London, as well as publishing her book *Europe: a regional geography* in 1934, which was still in print in the 1960s.

Details of 'Miss Wilford', despite bearing 'the actual work of draughtsmanship', that is, drawing the (black and white) maps, were absent from the title page and little is known about her generally. Wilford's quasi anonymity in the atlas, being referenced only by her last name in a 'note', was mimicked in a review of the *Atlas of economic geography*, which highlighted the role of 'Miss Shackleton' who 'prepared' the black and white maps.[70] Wilford was possibly a colleague of Shackleton and Lyde and may have been an assistant teacher at the University College, London, and it is likely that she was not a professional engraver but rather an individual with particular drawing skills (the maps being distinct from the rest of the atlas, being hand drawn and printed in black and white, and being printed separately to the other maps in the atlas). It is her distinct role in the atlas as 'draughtsman'—as opposed to 'editor' or 'mapmaker'—as well as her gender, which help to explicate Wilford's transparency in the atlas.

In school atlases and other cartographical works, individual engravers were often anonymous whilst editors, mapmakers and other professionals received acknowledgement on the map or in the title page. In this way, in contrast to Wilford's obscurity, the atlas recognised Shackleton—*editor* of Wilford's maps—on the title page. There was a hierarchy in the production of atlases but its function shifted and was negotiated, as the examples above indicate, between the authority of 'mapmaker', 'publisher' and 'editor'. In figure 4.8, I build once again on Darnton's communications circuit (see chapter 2, 22) in order to conceptualise associations between all known contributors to the *School economic atlas*—both those acknowledged and those not.

[68] *Atlas of economic geography* (1928), ii, i.
[69] Maddrell (2009), 207–208.
[70] Anonymous (1929), 60.

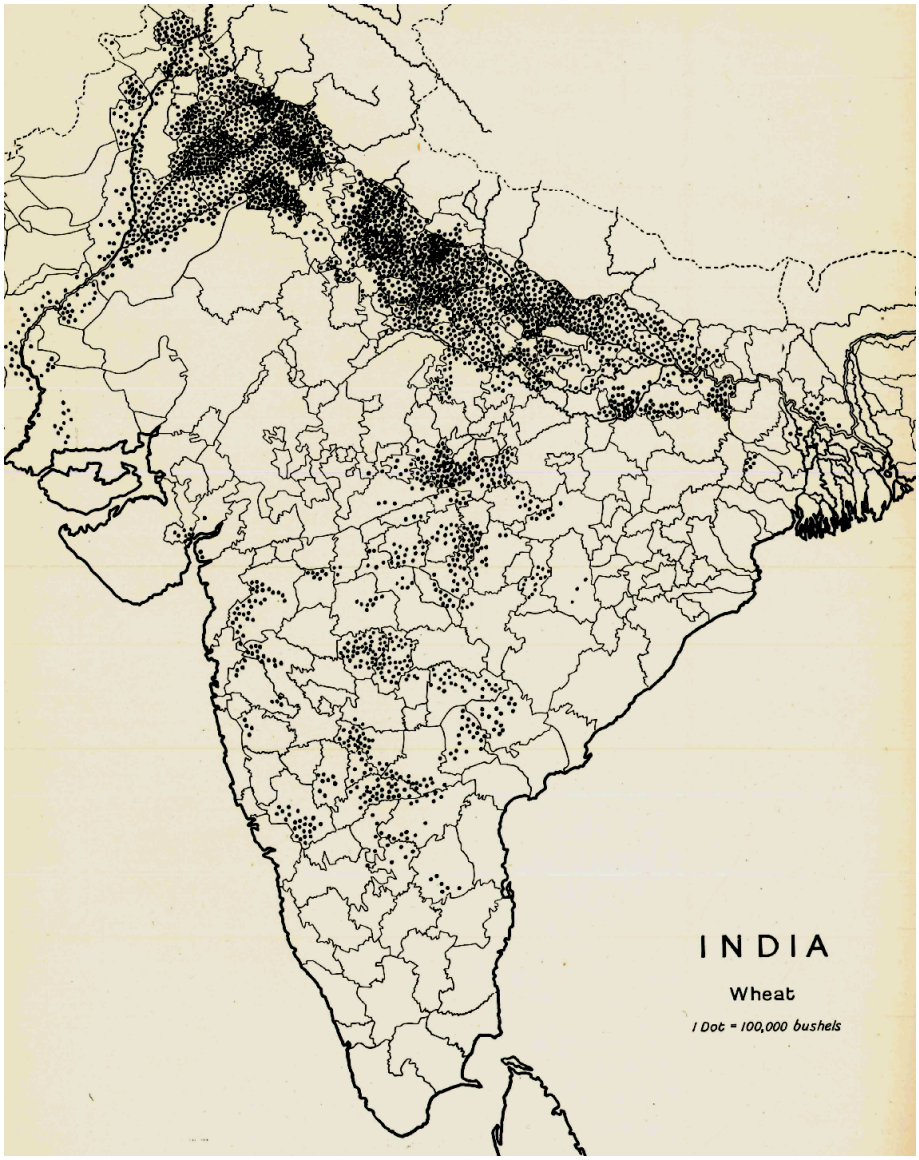
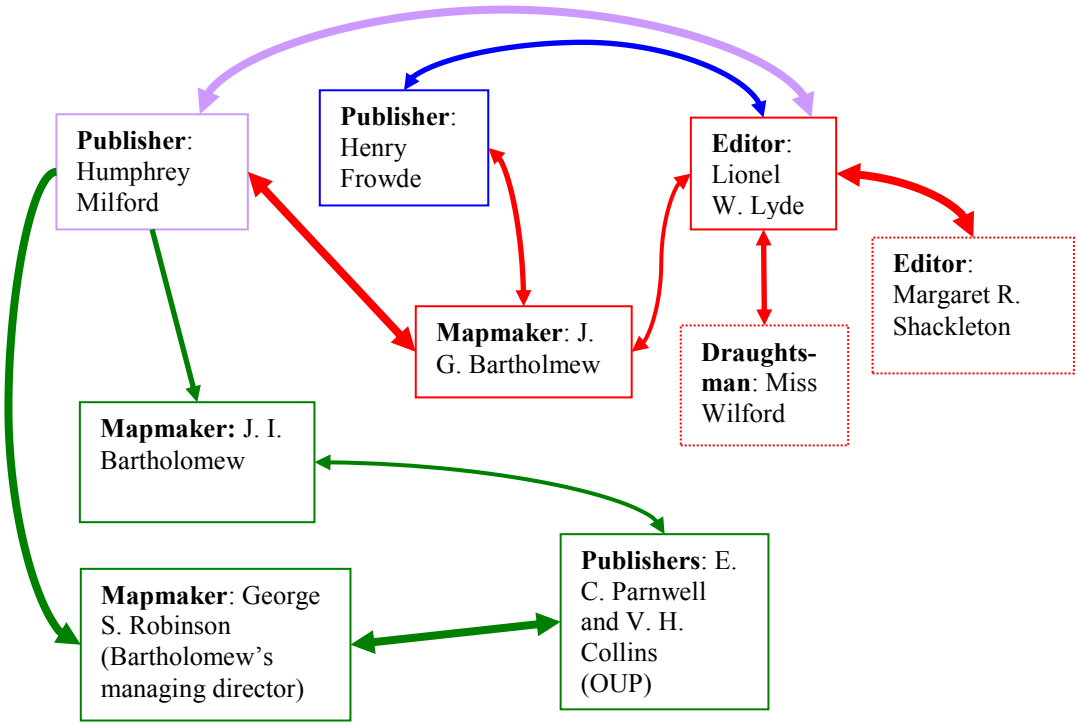


Figure 4.7. Black and white map by Shackleton and Wilford. Shackleton was described as bearing the 'work behind' the maps and Wilford as doing 'the mass of the actual work of draughtsmanship' (Source: *Atlas of economic geography*, 1928, ii, plate 54). Reproduced by permission of the Trustees of the NLS.



Key

Arrows:

Indicating the exchange of information. Their thickness reflects the type of exchange and the strength of association between individuals and between individuals and the atlas.

Colours:

OUP publisher named in 1910 edition of the *School economic atlas.*

OUP publisher named in subsequent editions after Frowde retired.

Contributors named in every edition between 1910 and 1930.

Red dashed line indicates contributors to the 1928 edition only (*Atlas for Economic geography*).

Contributors negotiating the reprinting of the atlas, concerned mainly with decisions about the number of copies and production costs. John Ian Bartholomew was the only one of these persons named in the published atlas.

Figure 4.8. Contributors to the production and re-production of the *School economic atlas*, 1910–28.

Whilst little is known about Shackleton and Wilford's exact roles, Lyde's involvement in the economic atlas can be expounded by looking at the atlas itself and by analysing correspondence from him to OUP publishers; John George Bartholomew; Graham Robinson (Bartholomew's director); and later John Ian

Bartholomew. Lyde's part is obscured in part by the suggestion in the title page that his role consisted of contributing to the introductory text. His instructions to Bartholomew add to this his extensive involvement in the planning of the maps in the atlas. In the revision of the atlas to form the *Atlas of economic geography* (1914), for example, Lyde provided Bartholomew with extensive notes for the addition of certain maps: in a letter sent from Milford to John George Bartholomew on behalf of Lyde, Lyde presented a list of new maps to be inserted; his objections to the existing and suggested trade tables; details of desired changes to the existing map content; and a demand that Bartholomew send him a completed copy of the atlas before it was finally printed (Fig. 4.9).[71]

Despite being an absent contributor, seemingly never meeting Bartholomew in person to discuss the atlas, Lyde provided feedback on Bartholomew's proof maps throughout production, indicating which maps were satisfactory and which were not: 'I have ticked off or asterisked each page in light pencil. A tick means that I approve; an asterisk means that I do not approve'.[72] His contribution, like others' involved in the atlas, was much more than the title page would have us believe. An analysis of extant communication Lyde sent to Bartholomew and OUP publishers provides a way to understand part of the motivation shaping the changing narrative in the maps and stylistic features of the *Economic atlas* between 1910 and 1928, and how this was bound up in the development of geography as a discipline.

[71] NLS, Acc.10222, Proof Maps, 69, Letter and notes from Lyde forwarded to Bartholomew by Milford, 23 February 1912.
[72] NLS, Acc.10222, Proof Maps, 69, Letter and notes from Lyde forwarded to Bartholomew by Milford, 23 February 1912.

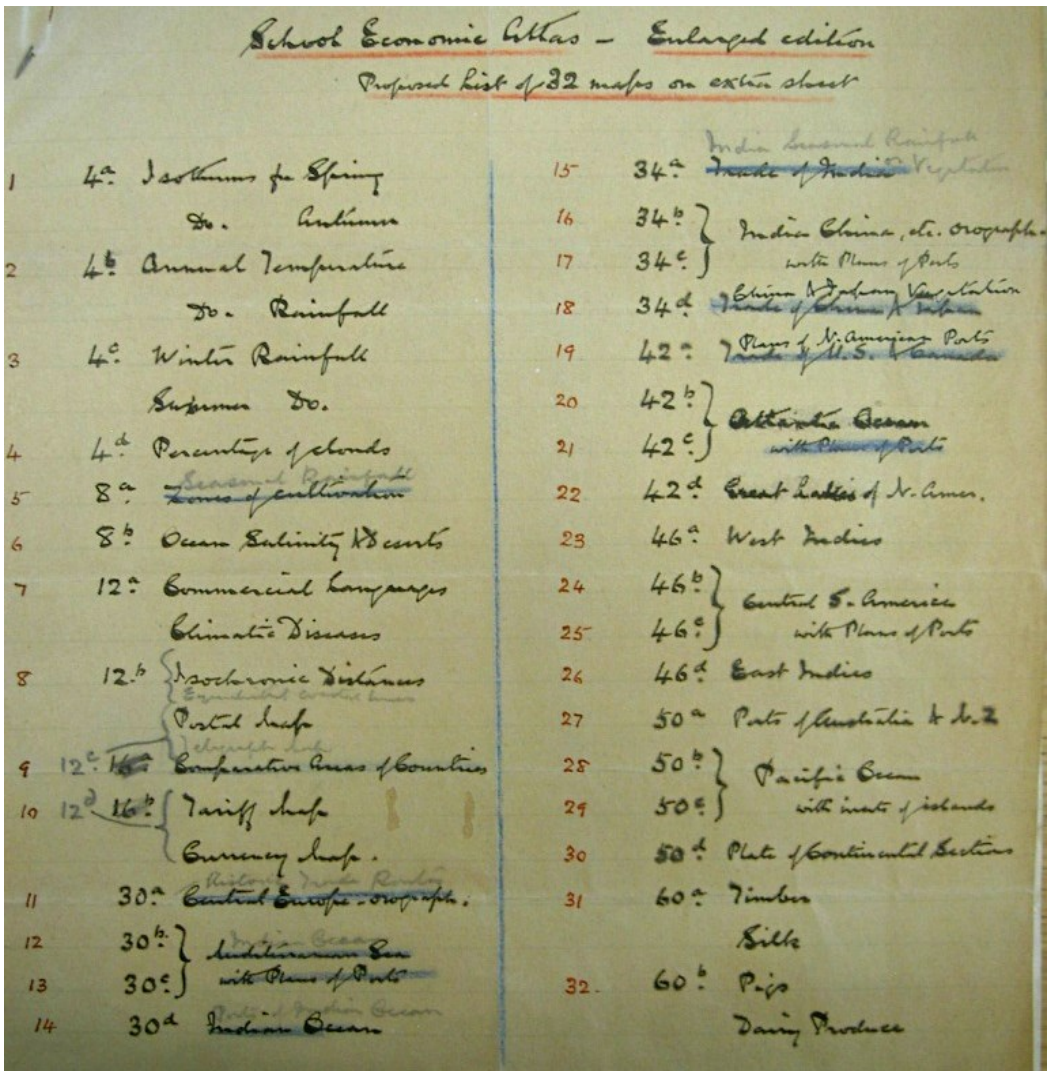


Figure 4.9. Lyde's list of additional maps for the *Atlas of economic geography* (1914). These notes highlighted the specific maps to be added to the existing compilation, continuing the same sequence of maps as the existing atlas and inserting new maps between them (Source: NLS, Acc.10222, Proof Maps, 69, Copy of Lyde's notes on the maps to be included in the new 1914 edition of the *School economic atlas*, undated). Reproduced with permission of HarperCollins publishers.

'Commercial' or 'economic'?

Lyde's involvement in the production of the *Economic atlas* and how this was complicated by his particular views about the ways geography should be taught and represented in a school text. It is Lyde's way of seeing and its influence on the style and content of this atlas which forms my focus in the remainder of this chapter. Lyde subscribed to a field of geography that focused on the commercial products and practices characterising specific places. Initial ideas about this type of geography

were propagated under the term 'commercial geography', evident in Hugh Robert Mill's 1894 book *Elementary commercial geography*, in which Mill defined 'commercial geography' as 'the description of the earth's surface with special reference to the discovery, production, manufacture, transport and exchange of useful or desirable things. It is geography applied to the purposes of commerce'.[73] Mill's text dealt with 'commercial geography' in relation to the products, transportation, climate, people, and natural resources of particular countries. In this way, commercial geography was a matter of thinking about what products (wheat, maize, sheep, cows etc.) were found where and why (in relation to the climate best suited to these 'commodities').

Another individual shaping these ideas about commercial geography, and who informs my interpretation of Lyde's discursive approach, was George Goudie Chisholm. Chisholm was the first lecturer in geography at the University of Edinburgh in 1908 but, as Wise points out, his reputation as a commercial geographer was already established through his prolific publication: for Chisholm, 'the function of geography with respect to any class of phenomena that have a local distribution [is] to explain that distribution in so far as it can be explained by variations connected with place in the operation of causes whose operation varies according to locality or according to the relation of one locality to another'.[74] His seminal book *Handbook of commercial geography* (1899) was published successively in numerous editions between 1889 and 1928, and posthumously thereafter. *Handbook* contained no definition of commercial geography but the text's purpose was described as 'a general work of reference on all that may be included under the head of commercial geography' and, like Mill's idea of commercial geography, Chisholm's was a spatial biography of natural resources and commercial products in relation to their physical location and the climate that gave rise to them: he organised his *Handbook* into 'general facts relating to the production, distribution and exchange of commodities', 'products dependent directly or indirectly on climate', 'manufactured articles in which various materials are used', and 'countries'.[75]

[73] Mill (1894), 11.
[74] Quoted in Wise (1975), 5.
[75] Chisholm (1889), ix–x.

Chisholm's focus on commodities was also evident in his contribution, along with American geographer C. H. Leete, to Longmans, Green and Co.'s *New school atlas* (1901), produced for North American readership. This atlas contained a map of North America presenting, by colour shading, the location of 'commercial products' such as barley, corn, wheat, oats, rice and so on (Fig. 4.10).[76] This map informed readers of the extent and location of 'products' in North America. For Chisholm, reflecting on 'the relations of geography and commerce' in his presidential address at the 1907 BAAS meeting in Leicester, 'commerce' was 'the mutual advantage to be derived from the exchange of commodities produced in different places'.[77]

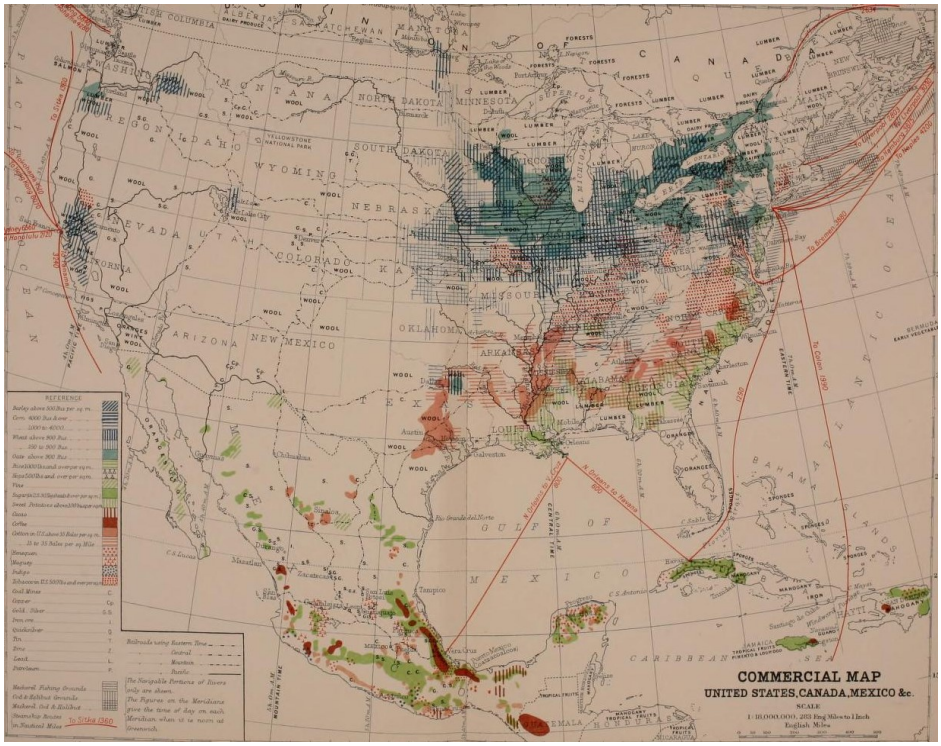


Figure 4.10. Commercial map of the US and Mexico (and enlarged colour guide). This map presented, by colour shading, the production of barley, corn, wheat, oats, and so on, in relation to the main commercial highways. The focus on commercial 'products' and their location made this map a manifestation of some of the ideas in Chisholm's *Handbook* (Source: *Longman's new school atlas*, 1901, plate 17). Reproduced by permission of the Trustees of the NLS.

[76] *Longman's new school atlas* (1901, London: Longmans, Green and Co.), plate 17.
[77] Chisholm (1908), 556.

Negotiating atlas style and map content

In his 1898 book *Commercial geography of the British Empire,* Lyde similarly described commercial geography in terms of its emphasis on where 'commodities' were 'found':

> Commercial geography may be roughly described as a study of the earth from the standpoint of the ordinary intelligent merchant. What such a man wants to know is—*where* he can get the largest amount of the usual commodities, in the best condition, at the shortest distance (of time or space), for the least cost, and with the greatest regularity.[78]

Increasingly, however, as the twentieth century progressed, geographers, including Lyde, began to differentiate between this type of geography (commercial) that focused on products, and the type of geography (economic) which was seen as dealing more critically with why particular places gave rise to certain commercial resources and activities. Economic geography started from the point of view of place—the physical and cultural influences on a country's commercial status—rather than beginning with the commodities themselves. According to Wilhelm Götz, a leading German scholar in economic geography at the time of Lyde's writing, economic geography was 'the scientific task of dealing with the nature of world areas in their direct influence upon the production of commodities and the movement of goods'.[79]

Economic geography was in part a reaction to the prevalence of commodities in commercial geography and Lyde's *Economic atlas* provides an indication of how this tension between interpretations of the same discipline, namely geography, shaped the style and content of geography texts and, specifically, school atlases. Thus, in the 1914 edition of the *Oxford economic atlas*, Lyde defined economic geography in relation to its distinction from commercial geography: 'economic geography . . . is not merely a knowledge of where products are found or handled [like commercial geography], but . . . presents the world as an economic unit, with each type—e.g. sailors, miners, farmers, or Danes, Japanese, Araucanians—in its place'.[80]

For neither commercial nor economic geography, however, was there a general consensus among supporters as to what either entailed. In 1917, Chisholm

[78] Lyde (1898), 1.
[79] Quoted in Barnes, (2009), 178.
[80] *Oxford economic atlas* (1914), iii.

was asked by RGS secretary Arthur Robert Hinks to produce a definition of 'economic geography' for a proposed 'Dictionary of geographical terms'. Unlike Lyde's alacrity to define this field of geography in the *Economic atlas*, Chisholm's communication with Hinks reveals uncertainty over the exact meaning of 'economic geography', reflected in the abstruse statement Chisholm provided:

> You know that I am in favour of definition, still I would have them wide enough to avoid the danger of tying teachers down too narrowly. I see that I have put 'transport' in place of 'distribution'; but after all I think it is better to keep 'distribution'. In economics it is distribution of wealth that is considered, and the expression 'distribution of commodities' should lead to no ambiguity.[81]

Challenges to more clearly define 'economic geography' were again raised by Hinks in a letter to RGS president Charles F. Close in 1929. Hinks reported that Douglas W. Freshfield, former president of the GA between 1893 and 1911, informed him that 'a small party of British geographical teachers, including [Alan Grant] Ogilvie, [Percy Maude] Roxby and others, have been putting their heads together to protest that this Society [the RGS] does not pay sufficient attention to human and economic geography'.[82] In order to address this Hinks proposed the Society's forthcoming centenary celebration and its 'habitability of the globe' theme be used as a way to appease such protests by having 'human geographers' (including economic geographers) submit suitable papers, giving 'an excellent opportunity of seeing how much there is in these *human* geographers who are anxious for recognition'.[83]

The popularity of economic geography at this time has also been elucidated in relation to the content and number of papers delivered to Section E of the BAAS between 1851 and 1933. As with many other topics covered in sectional meetings, in the papers delivered to Section E between 1851 and 1880 what was designated to be

[81] RGS, Correspondence Block (CB) 8/64 1909–1915, Chisholm to Hinks, 1 June 1917. Unfortunately, no record of this dictionary exists to enable a consideration of Chisholm's final printed definition but extensive correspondence in the RGS reveals incongruity between definitions of the discipline by the geographers involved in its production; perhaps they could never agree on a publishable text.

[82] RGS, CB 9/44 1921–1924, Hinks to Close, 17 October 1929. Ogilvie was at this time lecturer in geography at the University of Edinburgh in a department run by Chisholm. Roxby had previously founded the geography department at the University of Manchester in 1909 and was, from 1917, Professor of geography at the University of Liverpool, being the first of this kind at this institution.

[83] RGS, CB9/44 1921–1924, Hinks to Close, 28 October 1929. Earlier, in 1926, Hinks wrote to Lyde to ask him to review the Imperial Institute's exhibition on 'the economic geography of the empire', again highlighting concern with economic geography's place in geographical education (RGS, CB9/103 1921–1933, Hinks to Lyde, 4 October 1926).

'commercial' (rather than economic) geography lagged far behind the emphasis members placed on exploration. As the demand for exploration dwindled—Mackinder pronounced the 'closing of the world' in 1887—it lost its central position in Section E and the late nineteenth and early twentieth centuries saw more emphasis on other fields, like 'commercial' geography, which reached a high of 25 sectional papers on this topic between 1921 and 1933.[84] According to Withers et al, there were no papers specifically on 'economic' geography, although this may be a matter of 'commercial' papers being conflated with 'economic' (their distinctions being less than clear cut as evident above) or a matter of issues of 'economics' already having a place in Section F (Economics) of the BAAS.

The difficulty of defining economic geography was not simply influenced by differing views on its meaning and by the general lack of attention it received in the meetings and writings of the RGS and the BAAS in the early twentieth century. It was also complicated by the fact that, for some, the distinction between commercial and economic geography was negligible: many conflated the terms. In his 1916 address to BAAS section E at Newcastle, publisher and mapmaker George Philip described the challenge of representing cartographically 'the branch of geographical science dealing with the earth as the theatre of the production and exchange of *commodities*, which we call *economic geography*'.[85] The guidelines he presented to Section E were on the production of 'economic' maps for 'commercial' school atlases—using both terms interchangeably. His paper was a response to that 1915 BAAS report by a subcommittee of Section E (Geography) appointed to inquire into 'the choice and style of atlas, textual and wall maps for school and university use' whose recommendations we have earlier reviewed (see chapter 3). In relation to economic maps, the BAAS sub-committee concluded that 'historical and economic maps belong to special atlases or to text-books, and should be excluded from the school atlas'.[86]

In his report, Philip argued that economic maps *did* have a place in school atlases when produced using his guidelines. He presented a list of criteria for school atlases containing 'economic' data: such atlases should show the relationship

[84] Mackinder (1887); Withers, Finnegan and Higgitt (2006), 442.
[85] Philip (1917), 438.
[86] Walter (1916), 151.

between population, vegetation and economic activities; use gradations of colour (with regions of most intense development tinted most strongly); avoid the use of conventional symbols or words to indicate the distribution of economic production; mark only the great highways of commerce, giving distance from one place to another; include only the most important place names; present comparative graphs showing economic activities of different countries; and demonstrate the commercial developments of the continents on uniform scale and projection—supplemented by a larger scale map of Europe.[87]

Lyde's *School economic atlas* was published first in 1910, before Philip's paper was presented to the BAAS, making comparison unhelpful. Analysing Philip's own school atlases produced at this time, however, we find inconsistencies in his conceptualizing of commercial and/or economic geography since they met his guidelines only in part. Philip's *Modern school commercial atlas* (1927) presented commercial and vegetation maps together but nowhere did it represent population density, as Philip had insisted on in his BAAS report; the maps in the atlas highlighted the level of commercial development by using gradations of colouring but also employed symbols and labels—advised against in Philip's paper—to indicate certain natural resources (Fig. 4.11); and the maps showing commercial development in the *Commercial atlas* were not on a uniform scale or projection, as Philip suggested in his 1916 report.[88]

[87] Philip (1917), 439–450.
[88] *Modern school commercial atlas* (1927, London: George Philip and Son).

Figure 4.11. World map showing natural vegetation and distribution of animal life. The use of labels to show the latter contradicted Philip's own guidance on economic maps (Source: *Philips' modern school commercial atlas*, 1927, plates 4–5). Reproduced by permission of the Trustees of the NLS.

In reality, there was a lack of consensus over what constituted commercial and/or economic geography and how it should be conceptualised in a school atlas. As I have shown, this is apparent if we compare works by different geographers but it was also a feature of individual geographers' interpretations at different times and in different texts. This ambiguity led Paul de Rousiers in 1894 to remark on the 'rather vague term, economical [sic] geography, which now appears in every book and atlas'.[89] Such ambiguity is also evident in Lyde's work, as Clout has highlighted in relation to Lyde's geography literary texts.[90] As the twentieth century progressed, Lyde's geographical writings became increasingly 'economic' in focus and, unlike Philip, for Lyde economic geography was distinct from commercial geography. In a letter to Milford, eleven years after Lyde presented his work on commodities in

[89] de Rousiers (1894), 84.
[90] Clout (2011).

Commercial geography (1898), Lyde insisted that the use of 'economic' in the title of the *School economic atlas* was chosen to present a type of geographical knowledge distinct from commercial geography:

> If you remember in one of my earliest talks I urged very strongly that we should use the word economic for these atlases, and interpret it correctly (as far wider than commercial), because of the harm done to the teaching of geography by local authorities pressing teachers to "teach commercially", i.e.—from their point of view—dealing with facts (e.g. routes, coalfields, etc.) instead of with principles.[91]

Lyde saw himself as the sole authority with regards to the 'economic' and geographical knowledge to be presented in the atlas: 'I hope that Mr Bartholomew will allow me, as the only Professor of Economic Geography in the Kingdom, to know what my own chair deals with. It is not only with commercial geography'.[92] Interestingly, and in direct contrast to this later claim, twelve years earlier in 1895 Lyde had described himself as 'extension lecturer in *commercial geography* to the universities of Oxford and Glasgow'.[93] The stark contrast Lyde now made in the *Economic atlas* between commercial and economic geography is even more significant.

For Lyde, commercial geography was insufficient in a study of the world—the source of his warning to readers in the introduction to the *School economic atlas* that the maps showing only the location and extent of the world's 'commercial products' were 'the least useful; indeed, they are absolutely useless—and may be even harmful—unless they are used in close connexion with the physical and climatic maps which precede them'.[94] This apprehension was also a reflection of Lyde's distrust of statistical data, evident in his other geography texts: like his view of economic and commercial geography, however, Lyde's view on statistics in geography was complicated and, at times, contradictory. In a review of Lyde's *Peninsular Europe* (1931) in 1932, geographer Dudley Stamp challenged Lyde's declared suspicion in the introduction toward mathematics and yet his use of statistics throughout the text.[95] Stamp's analysis of *Peninsular* is in line with posthumous descriptions of Lyde's work by geographers: 'despite his [Lyde's] great

[91] NLS, Acc. 10222, Proof Maps, 69, Milford to Bartholomew, 19 December 1912.
[92] NLS, Acc. 10222, Proof Maps, 69, Milford to Bartholomew, 19 December 1912.
[93] Quoted in Clout (2011), 19.
[94] *School economic atlas* (1910), ii.
[95] Clout (2011), 23.

volume of publication, it is difficult to specify the precise geographical ideas behind Lyde's writing'.[96] I argue, however, that the providence of Lyde's writings and ideas, that is, their 'messiness', in fact mirrored those of many other so-called geographers whose work and approaches, in reality, had a multiplicity of origins, sometimes reduced by geographers today to a single period, event, or work in order to serve some historical perspective in the history of the discipline or in the provenance of an approach.[97]

The continually evolving and sometimes ambiguous nature of geography is evident in the production of the *Economic atlas* as Lyde attempted to define the nature of the geographical knowledge he was promoting. I suggest that what seems like incongruity in Lyde's texts is not only attributable (as Clout shows) to Lyde's personal and intellectual biography, such as his skill in creative writing or his training in classics and history.[98] The vicissitudes of Lyde's geographical theory were also a reflection of the very nature of geographical knowledge, its perpetually changing character at the hands of different individuals and in different periods. The inability of geographers to reach a consensus about what commercial geography and economic geography had in common or what they did differently informed Lyde's negotiations with Bartholomew and OUP: the style and content of the atlas became pivotal in Lyde's personal agenda to explicate his own views about economic geography and its distinction from commercial geography. The fact that this was 'messy' was a corollary of the multiplicity of ideas and approaches making up geography and, more specifically, economic geography.

In this way, we can understand Lyde's economic geography better if we consider how his agenda in the *Economic atlas* was complicated, in part, by his and others' ideas about a whole variety of issues that fell under the banner of 'geography': these included the role geography played in citizenship and education; the dominance of physical geography in geographical control; and the explanations geography provided for racial differentiation. It is to Lyde's perpetual negotiating of

[96] Clout (2011), 24.
[97] See Mayhew (2011, 23) for a discussion on how Strabo and Ptolemy, and their well known texts, have at times been misleadingly deemed the origins of geographical investigation and survey in order to valorise 'modern' geographical approaches today.
[98] For Clout (2011), the fact that Lyde did not attend lectures by Mackinder and Herbertson, like many of his contemporaries, was pivotal in the type of geography Lyde practiced and disseminated.

these aspects in the *Economic atlas* in relation to his theory of economic geography that we turn next.

Lyde's economic geography: imperial and global citizenship

It is significant that this change from the 'commercial' to the 'economic' perspective in geography and these attempts to define what each (or both) meant gained most attention from the end of the nineteenth century and increasingly as the twentieth century progressed, when attempts to establish geography as a science in higher and school education were prevalent (see chapter 2). Geography's economic character provided justification for its importance in education since geography as a university and school discipline was increasingly presented to be essential in the economic development not only of Britain but also the world.

To Lyde in the *Economic atlas* and in his other writings at this time, economic geography was essential: it was the most pertinent geographical topic in relation to pupils' futures as, principally, imperial citizens. Writing in 1910, when the first edition of the *Economic atlas* was published, Lyde considered that in order to be a 'science', geography must be taught from an 'economic' perspective, and in an article in 1908, Lyde revealed that if geography was taught correctly—from an economic perspective—this would secure the economic future of Britain: 'because it [geography] then becomes a course of scientific education and the imparting of useful knowledge ceases to be an end in itself, and becomes a means to a much greater thing—the development of mental power and the making of men'.[99] It was the making of citizens that Lyde believed was geography's purpose.

This largely imperial impetus behind Lyde's economic theories was evident in the plates of the *Economic atlas*. Plate 1 of the *School economic atlas* (1910) presented diagrams showing the 'growth of national commerce', indicating the growth of world trade over time, the proportion of trade held by different nations, and the growth of trade in the UK, Germany and France (Fig. 4.12). A map later in the atlas categorised the areas of the world most commercially developed, those capable of development, and parts deemed 'incapable of commercial

[99] Lyde (1910), 85.

development'.[100] These two plates informed readers of Britain's current leadership status in imperial economic activities and pointed to potential (imperial and international) commercial ties. In addition, Britain's part in world commerce was highlighted in the final fifteen maps of the *Economic atlas*, which showed the location of commercial products throughout the world with inset diagrams revealing the extent of products exported to the UK.[101] Although acknowledgement of international relations was evident, the focus in each edition of the *Economic atlas* was on Europe's supremacy in both imperial and economic relations.

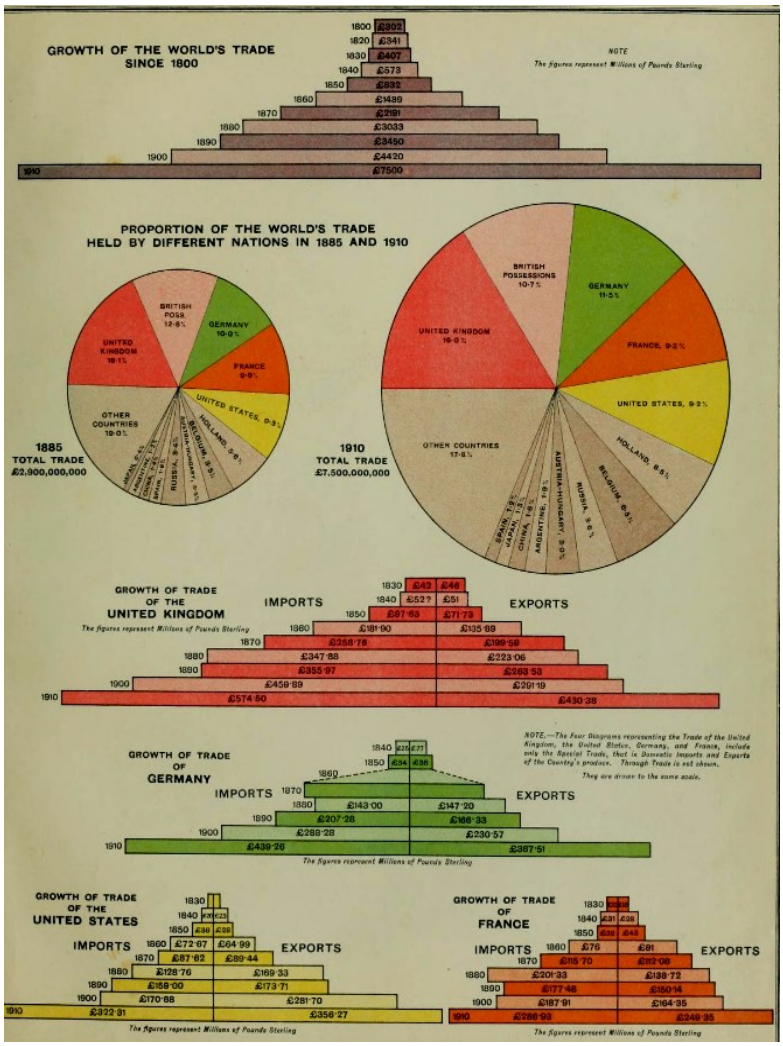


Figure 4.12. Comparative commercial growth of nations
(Source: *Atlas of economic geography*, 1914, plate 1).
Reproduced by permission of the Trustees of the NLS.

[100] *School economic atlas* (1910), plates 1 and 11.
[101] *School economic atlas* (1910), plates 50–64.

The pedagogy promoted in the atlas was therefore comparative, an approach also present in geography school texts at this time and what Ploszajska terms 'the rhetoric of difference' (see chapter 3).[102] With this method, Britain's economic, political and cultural character was represented in direct contrast to the rest of the Empire, and even to the parts of the world beyond, fulfilling Lyde's belief that economic geography allowed pupils to 'picture truly the conditions of foreign peoples in distant lands'.[103] Europe's, and particularly Britain's, part in the commercial activities of the world was reinforced in the 1928 edition of the atlas (*Atlas of economic geography*) in which the final maps, presenting commercial products across the globe, were replaced by those black and white maps by Shackleton and Wilford already mentioned above: according to Maddrell, Shackleton's stance in her 1934 text *Europe* revealed her to be a 'Europhile, believing Europe not only to occupy a physically but also a culturally and spiritually advantageous position in the world'.[104] Even if Lyde's focus was on inspiring 'men' or, in the Economic atlas, 'boys' of commerce, his text was influenced by female geographers with similar agendas of imperial citizenship.

This idea that geography was an aid to imperial activities was nothing new. John George Bartholomew had presented his view of 'commercial' geography in a similar vein at the 1885 Aberdeen meeting of Section E of the BAAS, delivering a paper on the scope of Australia for commercial development. In Bartholomew's view:

> The *commercial geography* of our British colonies should be made a subject of primary importance in school education so that the children of our working classes may thus become familiar with the advantages and disadvantages to be realised by living in India, Australia, Canada, Cape Colony, or any other part of our British dominions, and thus, by inducing free and voluntary emigration, avoid the very possible political necessity of compulsory emigration (emigration is covered in chapter 5).[105]

For Bartholomew, 'commercial geography' was an imperial tool to encourage pupils (British imperial citizens of the future) to emigrate to other parts of the Empire, just as Lyde and Shackleton saw a knowledge of 'economic' geography to be an aid in

[102] Ploszajska (1999), 106.
[103] Lyde (1908), 164; Maddrell (1998).
[104] Maddrell (2009), 207.
[105] Bartholomew (1885), 530.

the training of imperial citizens. It was the difference in terminology—commercial rather than economic—that fuelled Lyde's mistrust, as I have already shown, of Bartholomew's decisions in the production of the *Economic atlas*'.

Lyde's economic geography and its relations to physical geography

Linked to the comparative method in geography and to the idea that citizens (pupils) should know about the world, was the importance of physical geography in understanding differences and distinctions between countries, people and races throughout the globe. In the *School economic atlas*, interspersed between maps of the present imperial and predicted international economic connections were maps representing the physical conditions of different parts of the world—fulfilling Lyde's desire to present 'truly' the *conditions* of people throughout the globe and the impact of this on theirs and Britain's' economic activity. The comparative world trade diagrams on plate one (shown above) were followed by seven plates encouraging the comparison of orographical features, temperature, wind, vegetation, ocean currents and rainfall across the globe.[106]

We can understand more of Lyde's views on the predominance of physical geography and their relevance to his theories of economic geography if we consider the part physical geography had in the *Systematic atlas* (1895, school edition), a school atlas published by George Philip & Son fifteen years before the *Economic atlas*. The *Systematic atlas* was the result of collaboration between Philip and his three appointed geographers John Scott Keltie, Halford Mackinder and Ernst Ravenstein. In the preface to the atlas, the views of these men on the key role of physical geography was stated: 'we have sought to do justice to all departments of geography, but more especially to physical geography, which is the foundation of every other branch of the subject, and indispensable to a thorough mastery of its political and *commercial* divisions', and so physical geography's relationship to both commerce and politics was highlighted in the sequencing of maps: Europe, Asia and Africa were each given a physical map followed by a map showing political features.[107]

[106] *School economic atlas* (1910), plates 2–9.
[107] *Systematic atlas* (1895), v, plates 5 and 6, 24 and 25, 30 and 31

Negotiating atlas style and map content

The content and ordering of maps in the *Systematic atlas* reflected the views, stated elsewhere, of its contributors. Writing in 1897, Keltie revealed that 'the final object of [geography] is to investigate the correlation between humanity and its geographical environment' and, similarly, Mackinder, in his 1887 paper, referred to the importance of 'political geography' in relation to 'physical geography', believing that 'no rational political geography can exist which is not built upon and subsequent to physical geography'.[108] Adherence to physical geography was also highlighted by Ravenstein in his presidential address to Section E of BAAS in 1891, in which he explained that 'whatever changes may have taken place respecting the aims of the geographer, it is very generally acknowledged that the portraiture of the Earth's surface in the shape of a map lies within his proper and immediate domain'.[109] There was, therefore, a general consensus among the producers of the *Systematic atlas* that physical geography was the main controlling factor in shaping politics and economics.

Less agreement, however, existed within the geographical community over the particular theories used to explain these associations between the different fields of geography. In 1902, Herbertson, for example, commented that school atlases which emphasised physical geography and its controlling influence on political and commercial aspects were 'school atlases based on the true system ... I mean the system of placing a physical map of each country opposite the political map, so that the teacher can first insist on the *natural features of a region* and then deduce from them their historical, political, and commercial results'.[110] These ideas were in line with Herbertson's 'natural regions', which were based on the premise that the world was divisible by naturally occurring distinct parts. In his 'systematic classification of environments', the world consisted of areas with distinct relief, temperature patterns and rainfall distribution. On this basis, six main natural regions prevailed: polar; cool temperate; warm temperate; western tropical deserts; lofty tropical or sub–tropical mountains; and equatorial lowlands. According to Herbertson, the theory of natural

[108] Keltie (1897), 451; Mackinder (1887), 172.
[109] Ravenstein (1891), 531.
[110] Herbertson (1902b), 87.

regions was a 'method' to assist geography teachers to 'cultivate . . . to a higher degree the pupils' powers of comparison and judgement'.[111]

Whilst Herbertson's ideas were in line with Lyde's association between physical, political and economic geography in the *Economic atlas*, Lyde was apprehensive about adopting Herbertson's theory of natural regions (as were others) in his *Economic atlas*.[112] Lyde's response to Herbertson's theory in his 1910 book *The teaching of geography* was to confess he saw logic in it but preferred the use of 'political' geography to divide the globe since he believed the world was not made up of such distinct 'physical regions' as Herbertson suggested.[113] Lyde preferred 'political units' because, as he put it in the 1914 edition of the *Atlas for economic geography*, he found that political divisions (giving the example of 'Belgium' and 'Austria-Hungary') were more easily identifiable than those based on environmental divisions.[114]

Lyde's rejection of natural regions as a way of explaining the interaction between physical, political and economic geography presents a complication in his economic theories—a complexity mimetic of his views on statistics (see above)—since he continued to place emphasis in the *Economic atlas* on physical geography as a controlling factor on politics and economics. In light of this link between climate and economic development, Lyde saw physical maps of the oceans as essential in the *School economic atlas*: to enable pupils' understanding of 'the relations of land and water . . . so that the teacher can give from the map a complete lesson on the ocean as a *physical unit*'.[115] Bartholomew's failure to provide such physical maps in a 'patch-up' of the *Economic atlas* was a matter of great concern for Lyde. To Lyde, Bartholomew's neglect of physical maps of the oceans was an attempt to usurp his authority as an economic geographer and to deter him from using the atlas to instruct teachers and pupils about 'economic' geography, as opposed to 'commercial'. In a

[111] Herbertson (1905), 112, 104.
[112] Writing a memorial lecture on Herbertson's work for the GA, Unstead revealed that, along with Roxby, on hearing Herbertson's talk to the RGS in 1904 on the major natural regions, 'we were not satisfied by the evidence adduced. Also, we did not reach complete agreement with one another as to what should be the distinguishing characteristics of [what] "natural" regions' (Sheffield City Record Office (SCRO),Geographical Association (GA), 1988/60, Item 111b, Hand written memorial lecture by J. F. Unstead on A. J. Herbertson, undated).
[113] Lyde (1910).
[114] *Atlas for economic geography* (1914), xiv.
[115] NLS, Acc. 10222, Proof Maps, 69, Lyde to Milford, forwarded to Bartholomew, 19 December 1912.

letter to Milford on the ocean maps, Lyde noted: 'from his (Bartholomew's) letter I still fear that he is trying to avoid giving us exactly what we asked for . . . 'we [teachers] know perfectly well what we want; and even if he still chooses to think that 'economic and 'commercial' are the same thing, teachers know that they are not'.[116]

As a result of such exchanges, and epitomising the limited consensus among geographers over these questions of geographical approach, Milford confessed to Bartholomew that: 'I shall be relieved when I cease to have to act as buffer state between you somewhat incompatible geographers!'.[117] Lyde's demand for physical maps of the oceans was in the end met by Bartholomew in the 1914 *Atlas of economic geography* (Fig. 4.13). The importance of these maps to Lyde's economic theory was apparent in Lyde's explanation in the introductory text of the commercial development of man:

> The areas most favourable to modern development are essentially industrial areas in temperate latitudes, with easy access—climatic and commercial—to the ocean, and of a rock formation old enough to contain real coal. And it was the attempts to find a water route connecting the Mediterranean and the Indies that led to (a) the rise of the maritime powers of North-West Europe, (b) the discovery and development of the lands round the Atlantic, and (c) the domination of the world by the white man.

Lyde went on to describe the 'climatic dependency' of commerce in Asia, Africa, North America, Australasia and the British Isles: the physical geography of a place was not only influential on the products made there but in the introduction to the atlas Lyde encouraged readers to compare, for example, the economic maps of India, showing the predominance of tea and coffee, with the map showing population density illustrating the availability of cheap labour supporting this agricultural economy.[118] A place's economic character was tied up in the link between climate, population and available resources.

In the 1928 edition of the atlas, contradicting Lyde's previous view that physical maps of the oceans were essential in any 'economic' text, these maps were excluded. Whilst the reason for this omission is unknown, we can predict that the explanation probably lies in the combined influence of Lyde's changeable views,

[116] NLS, Acc. 10222, Proof Maps, 69, Lyde to Milford, forwarded to Bartholomew, 2 January 1913.
[117] NLS, Acc. 10222, Proof Maps, 69, Milford to Bartholomew, 2 January 1913.
[118] *School economic atlas* (1910), v.

geography's evolving character, and the production and editorial process to which Cramp, Robertson and Hardie's ideas were also subjected.[119] The 'economic' character of the atlas, and of geography generally, was subject to rearrangement, omission and alteration, and was so because of different ideas and approaches concerning the interaction between economic, political and physical geography.

[119] *Oxford economic atlas* (1928).

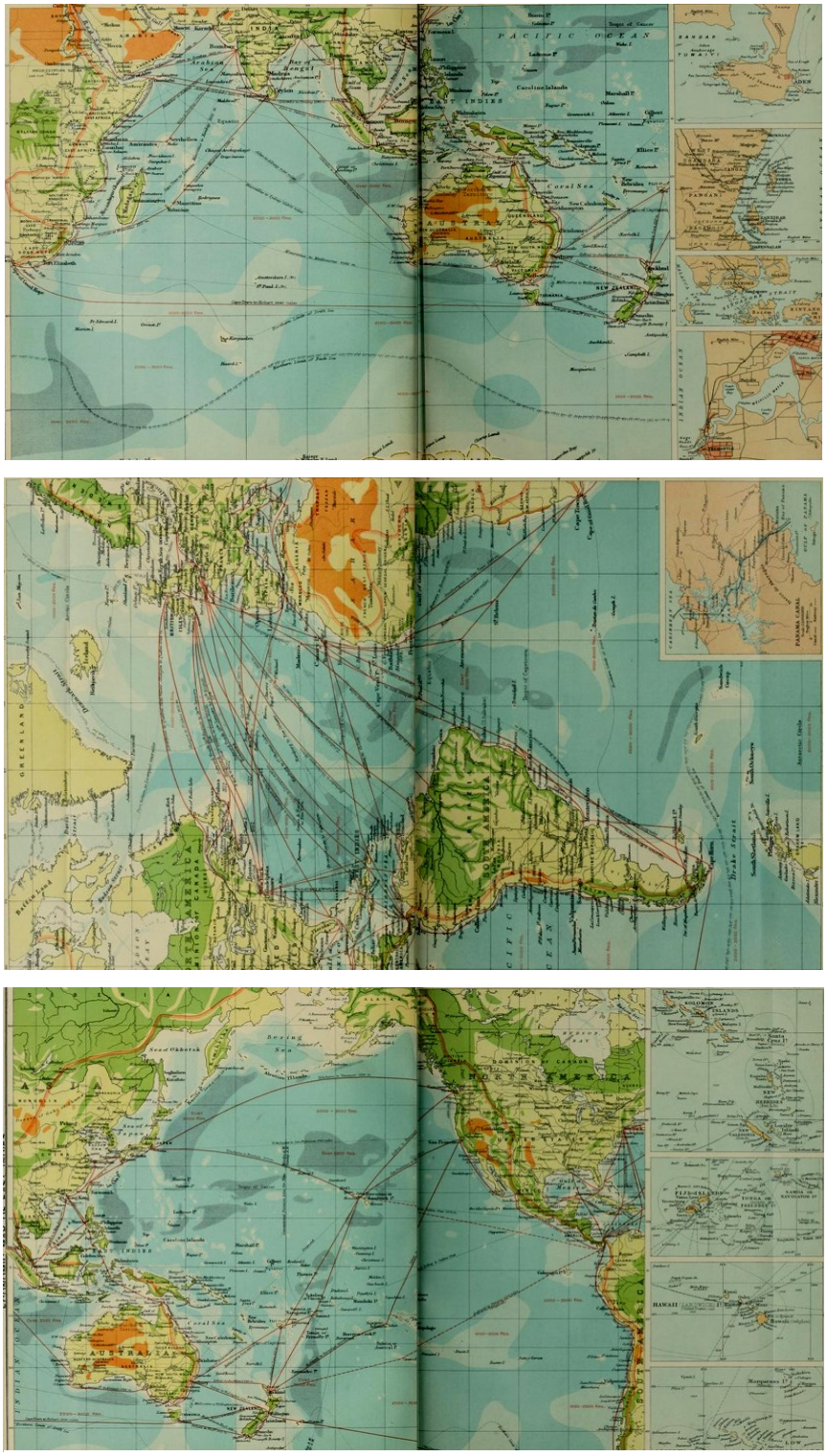


Figure 4.13. Physical maps of the Indian, Atlantic and Pacific oceans. Each of the three maps of the ocean indicated physical features of surrounding countries and, according to Lyde, made the atlas distinctly 'economic' in character (Source: *Atlas of economic geography*, 1914, plates 30b–c, 46b–c, 50b–c). Reproduced by permission of the Trustees of the NLS.

Lyde's economic geography and racial differentiation

In its map content and explanatory text, the *Economic atlas* demonstrated Lyde's adherence to a version of geographical control—however much it varied between different editions. Economic geography for Lyde was, in part, a way of understanding distinctions between different parts of the world and their inhabitants, to a large extent conceptualised through differences in physical (climatic) features and, seen as tightly bound to these, different racial characteristics. This broad racial and climatic discourse was also evident in school textbooks.[120] Like the meaning of commercial and/or economic geography, however, the relationship between race and place was open to interpretation. Livingstone, exploring 'the moral discourse of climate', points out that for many geographers or natural scientists in the nineteenth century 'the underlying assumption was that the ties between race and place were tight, very tight indeed, either because climate *produced* race, or because "Nature" had created different races and *placed* them in appropriate geographical regimes'.[121]

Theories about this relationship between race and climate were intertwined with broader discourses on anthropogeography (what is often now termed environmental determinism), greatly informed by Darwininan and Lamarckian explanations of difference: W. P. Rutter in 1913 informed readers that 'like many other branches of knowledge geography has gained clearness, thoroughness, and cohesion by the application of the Darwinian theory of evolution to the many problems encountered'.[122] As we have seen from attempts to define economic geography, ideas about racial differentiation occurred concomitantly with geographers' desires for their discipline to be accorded scientific status.

The *Economic atlas* provides insight into some of the ways racial difference was conceptualised in connection with physical geography and—addressed less in previous studies on racial representation—it indicates how atlas style and content outlined the way in which Lyde (and others) saw race and climate (in their various guises and interactions) as intimately connected to the resources and commercial activities found in certain locations, that is, to economic geography. Lyde's theories about the interaction between race and environment, what Livingstone terms 'moral

[120] Maddrell (1996); Ploszajska (1999), see especially chapter 4.
[121] Livingstone (1991), 416.
[122] Rutter (1913), 112.

evaluations of ethnic difference', were in line with many others': this morality of racial distinction was also manifest in the writings of Ellsworth Huntington, who saw climate as a determinant of human activity, describing African blacks as "our primitive ancestors" and confining American Indians to the periphery of civilisation, both incapable of rising to the level of white Europeans; and this discourse of 'otherness' was also developed in the work of Ellen Churchill Semple.[123]

Lyde's view of the importance of the physical environment to economic development, evident in his insistence on physical maps, both facilitated and reinforced these widely-held views on racial differentiation. In the 1910 edition of the *Economic atlas*, Lyde's ideas about race, climate and commerce were based on the assumption that each race originated from 'a common type, the specific variations being due apparently to the climatic character of the zoological areas over which they respectively spread'.[124] Lyde's argument was that differentiation between races was the result of 'slow adaptation to their special geographic environment', which was in line with the theory of monogenesis—climate produced race. Thus in the 'Negro', Lyde saw the 'geographic control of damp heat', in the yellow man 'the geographic control of an essentially continental climate', and in the white man 'the geographic control of a temperate peninsula'; these climatic influences leading to distinct racial characteristics in all three. Readers of the *Economic atlas* were so informed that climatic influence on race was unequivocal but its effect was not equally manifest among the different 'race' 'types': racial groups were part of a hierarchy from white, the most civilised, to black, the least.

An explicit representation of these racial strata was given on plate 13. This 'race' map was an example of 'anthropometric cartography' and was an attempt to illustrate visually geographers' (and others') categorising and devising of the 'races of mankind' in three varieties: 'black type', 'white type' and 'yellow type' (See Fig. 4.14 below).[125] The map supplemented Lyde's musings in the introduction at the same time as the introduction was an elaboration (and a justification) for the racial hierarchy presented in the map.

[123] Livingstone (1991), 413, 428; See Keighren (2010) on Semple.
[124] *School economic atlas* (1910), v.
[125] *School economic atlas* (1910), plate 13.

Negotiating atlas style and map content

Just as Lyde's ideas about commercial and economic geography evolved over time so too his racial theories in map and text form altered between the editions of the *Economic atlas*. In the 1914 edition of the atlas (entitled *Atlas of economic geography*), Lyde revealed a less rudimentary division between black, yellow and white types, illustrating instead gradations of these race types and revealing the empirical evidence and discursive principles upon which such representations were based.[126] In this 1914 atlas an additional map presented cloudiness across the world, which was to be compared (according to Lyde's expanded introductory text) with the race map (Fig. 4.14).[127] Readers were told that racial colour was directly related to the necessity of protection from sun light (connected to cloud cover in different latitudes): 'the damp dark forested fjords of Scandinavia have been the race-home of the pure blondes' while 'the pure black skin is the natural product of the dry air of tropical deserts and grasslands'. The Mediterranean sunlight, however, produced an 'almost pure black'. Further variations of skin colour included the 'yellowy-black, as in the Krus of the Guinea Coast', and 'the real yellow or parchment skin of the Mongol'.[128] Like in his explanations of the role physical geography had in geographical control, Lyde's ideas about race were not fixed, evident in the changing nature of maps and prefatory features between atlas editions.

[126] *Atlas of economic geography* (1914), vi.
[127] *Atlas of economic geography* (1914), plates 4d and 13.
[128] *Atlas of economic geography* (1914), plate 4d, vi.

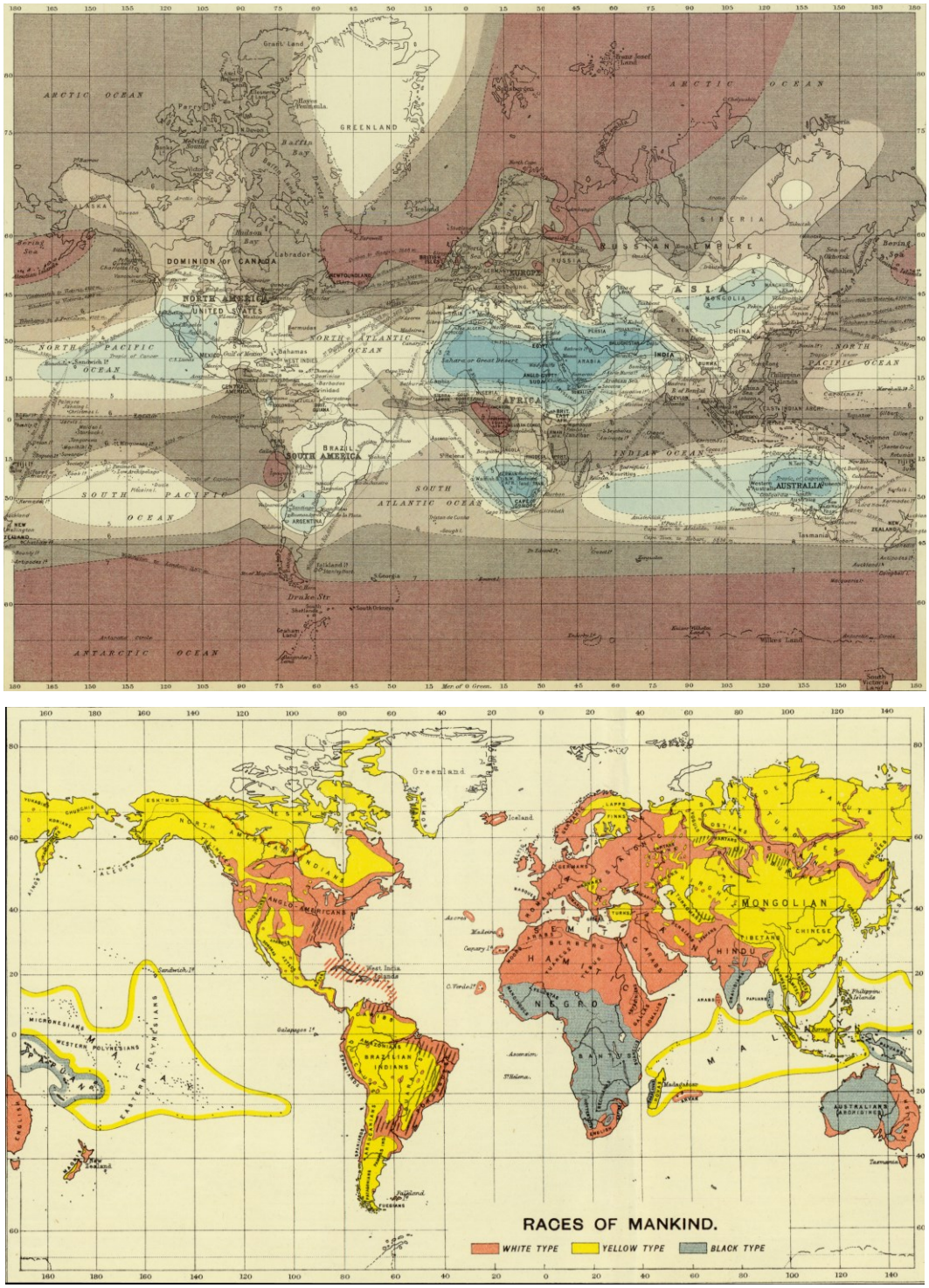


Figure 4.14. Mean annual cloudiness and race. Lyde encouraged readers to compare these two maps, which in his eyes helped to explain racial differentiation across the world (Source: *Atlas of Economic Geography*, 1914, plates 4d and 13). Reproduced by permission of the Trustees of the NLS.

Negotiating atlas style and map content

The importance of presenting the association between racial features and climate in the *Economic atlas* resided, for Lyde, in the importance this relationship had to the distribution of economic development across the globe. In the introduction to the *Economic atlas*, Lyde revealed that the world map presenting 'races of mankind' should be compared with maps showing climate and commercial development since humans' most suitable occupations were determined by climate and subsequent racial character:

> In the case of the Negro, climatic influences—acting direct and through the typical food—lead to the early closing of the 'seams' between the bones of the skull; and thus the development of the brain is arrested, and the adult is essentially unintellectual. On the other hand, he is naturally 'acclimatized' against numerous diseases and other conditions of life and work which are very adverse to the White man. He is, therefore, of great use as a manual labourer in a 'steamy' climate, e.g. on a cane–sugar plantation.[129]

This was a statement that reflected Lyde's introductory statement in 'Savage and civilised races' in 1896 and which was echoed in the reprint of *Man and His Markets* (1924). It reveals that Lyde's economic geography was informed by a 'moral geography'—climate and race determined the character and intelligence of people in specific locations.[130]

Lyde's rhetoric on race therefore fits what Livingstone calls 'the moral discourse of climate', also evident in the work of phrenologists like Samuel George Morton who constructed the largest collection of skulls at Philadelphia's Academy of Natural Sciences. Morton's measurements of the cranial capacity of races across the Americas presented a 'moral geography' in which race, closely connected to climates, determined intellectual aptitude. Thus Morton reflected on the 'inaptitude of the Indian for civilization', separating this race type from the 'white man' who was distinct both in the structure of his mind (and skull) and in his 'social relations'.[131] Lyde's moralising of race went further than Morton to relate the physical structure of the skull to specific economic activities (and abilities). Yet his ideas reflected Morton's hierarchical stance: following both monogenetic and polygenetic racial theories, in the first edition of the *School economic atlas* (1910) Lyde believed 'primitive man' was incapable of modern commercial development since 'primitive

[129] *Atlas of economic geography* (1914), v.
[130] Clout (2011); Livingstone (1991).
[131] Livingstone (1991), 414, 419–420.

man, historically and economically, is at the mercy of his environment; and his interests are, therefore, local and narrow and almost entirely related to material needs and processes'.[132]

Lyde's moralising upon spatially varied economic development in the 1910 *School economic atlas* changed between the subsequent editions of the atlas, revealing once again the multiplicity of Lyde's theories on economic geography, and race. In the 1914 edition of the atlas, although the same racial map was used, Lyde was less adamant about the fixity of 'primitive man's' lowly condition. Explaining the race map in the introduction to this atlas, Lyde claimed that advances in knowledge (by white Europeans) were capable of alleviating the ailments, in character and make-up, of certain races.[133] As Livingstone notes, in the minds of some naturalists and geographers, ethnic constitution was not entirely explained by geographic factors, but it was also subject to technological innovation and medical progress.[134] Such developments, influencing geographical explanations of racial difference, were reflected in Lyde's extended introductory text in the 1914 edition of the *Economic atlas*. In this prefatory feature, Lyde referred to the example of the difficult problem of the 'black' man's 'incurable laziness . . . [which was] now being solved by the knowledge that it is the direct consequences of lifelong martyrdom to hookworm': the benefit for the economy, namely of Britain and the Empire, was that relevant treatment was increasing the 'black man's' capacity for work.[135]

The ability of racial types to adapt to certain climatic and other influences led Lyde (and many others) to state in this 1914 edition that 'no race can remain permanently true to type under conditions (climatic) essentially alien to those of its original race-home', contradicting Lyde's ideas in the earlier edition of the atlas that primitive man was incapable of progress to the level of civilised man.[136] Lyde's more positive and empathetic racial perspective was still in line with monogenetic racial theories that climate moulded race, but it opposed polygenesis, which stated that different races were different species originating in different areas of the world

[132] *School economic atlas* (1910), 12.
[133] *Atlas of economic geography* (1914), xi.
[134] Livingstone (1991).
[135] *Atlas of economic geography* (1914), xi.
[136] *Atlas of economic geography* (1914), xiii.

and—in contradistinction to Lyde's altered/'new' economic theories—that each race was a static type.[137] For Lyde, the continued evolution of race was not only manifest in cranial change—the 'typical negro' in the new environment of North America had the same 'facial outline' and 'skull shape' as the white man—but it was also marked through 'intellectual development', the 'black' type able to progress from 'lazy' and 'unintelligible' to the equivalent of fully developed civilised (white) man.[138] Lyde's moral, racial and economic geography responded to recent developments in the theories of racial differentiation, once again reflected in the content and style of the *Economic atlas'* prefatory features and maps.

Despite the ability humans possessed to overcome alien climates, this too had a hierarchical character: Lyde warned readers that racial, moral and economic adaptation was very slow and as a result 'the greatest care is needed in introducing native peoples to modern methods of life and work'.[139] In other words, social, moral and economic development remained intimately connected to cranial capacity (an indicator of racial type) which was a product of climatic control: whilst technology and culture could assist, the controlling factors of economic progress (climate and race) were slow to respond. For Lyde, environmental control remained dominant in explanations of racial and economic difference, however many variations his explanations of this relationship took.

Conclusion

Lyde's interpretation of 'economic geography' was greatly informed by his understanding of the interaction between climate and race and the influence this association had on economic development. Clout, reviewing Lyde's geographical and other writings, concludes that Lyde never truly managed to 'convince his audience of the complex relationship between groups of people and their geographical, cultural and technological surroundings' since he never defined his final position on the matter.[140] The alteration and changes to style and content of the *Economic atlas* reflect this limited fixity of 'economic geography' in Lyde's mind

[137] Winlow (2001).
[138] *Atlas of economic geography* (1914), xiii.
[139] *Atlas of economic geography* (1914), xiii.
[140] Clout (2011), 37.

and I would argue are an indication not only of Lyde's own inability to define the field but they reflect the very nature of geography as a discipline, and any discipline for that matter, demonstrated by the constant evolution of ideas among geographers attempting to explain the link between humans and their environment.

Lyde's insistence on an authorial presence in this atlas was intimately connected to his desire to explicate economic geography and what he saw as its value and importance over and above 'commercial' geography. His challenging of Bartholomew's decisions over atlas style and map content was less a matter of a belief that manuscript should match print as Cramp saw it, nor was it motivated by a concern like Hardie's that his name failed to fit the purpose of the atlas (Lyde fully believed his was the only one suitable for the job); and unlike Robertson, Lyde didn't invariably trust the judgements Bartholomew made. Lyde's anxiety in the production of the *Economic atlas* was a result of his agenda to clearly define 'economic' geography; the lack of 'fixed' definition in the atlas and in Lyde's other works is a reflection not of his inability to achieve a standard approach but of the real and diverse visions geographers had for the practice and episteme of geography.

School atlases were sites where individuals could assert their view of the world, which greatly influenced atlas style and map content. A lack of consensus on how the world operated, namely in terms of understanding the interaction between 'man' and his environment, meant that different atlases presented distinct perspectives and in a single atlas the knowledge contained was subject to contestation among producers. Atlases also faced change over time as ideas developed or altered. The involvement of particular individual geographers meant that certain ways of seeing predominated in an atlas, but even these were subject to change and inconsistency. In this way, atlases were never finished objects but were continuously adapted to serve different agendas, respond to new geographical knowledge, and (if necessary) adopt corrections. The fact is that different versions of a text will have different meanings as a result of their re-composition and re-editing. This challenges both the authority of the 'author' and the stability of the text. As Stanley Fish argued 'there are no determinate meanings and . . . the stability of the text is an illusion'.[141]

[141] Fish (1980), 312.

Negotiating atlas style and map content

In this chapter I have revealed that the 'messiness' of geography's character at any one time was articulate through questions of authorship in the production of school atlases. Authorship served a particular function—'a certain functional principle'—in texts, its purpose varying both between different atlases, as shown above, and between individual producers in a single atlas.[142] Authorship was in any case in the eye of the beholder: it meant different things to different people. Even when the assumed role of these categories was agreed upon in theory, in reality this was less clear cut, the process of transformation from manuscript to print subject to interpretation and error and atlas producers contesting the meaning of 'editor', 'mapmaker' and 'publisher'. For some, authority in the production process meant getting their views about geographical knowledge clearly represented in the published atlas: when the transformation from manuscript to print undermined this so, too, it questioned their authorial integrity. Differences of opinion over geography thus complicated the production process as to what geography did or should look like.

In Eisenstein's words: 'authority is a social nexus, not a personal possession' and in her mind 'a hypnotic fascination with the isolated author has served to foster an over determined concept of authorship, but (reciprocally) an underdetermined concept of the literary work'.[143] The examples above reveal that the materiality of texts had an impact upon their reading and interpretation. McGann agrees, seeing the text and its material form as 'clearly involved in the structure of the book's meaning'.[144] School atlases, in part, reflected the complexity of the intellectual, professional and political contexts of producers and shed light on their decisions about knowledge content and style. A text's material features and its cognitive content, however, are not the only principles influencing textual meaning. We need to look also, as I have shown here, at the specificities of atlas production, that is, who was named on the title page and why; what was lost in the translation from manuscript to print; and what explanations exist for the inclusion (or exclusion) of certain maps or text. Studied in conjunction with the texts, the production records in publishers' archives allow us to do this.

[142] Foucault (1989), 290.
[143] Eisenstein (1983), 389.
[144] McGann (2002), 71.

In the case of the atlases I have presented in this chapter, it is in the editorial notes, correspondence, personal relations and intellectual motivations that the people behind stylistic features and map content are located and where the true nature of authorship is discovered. It is helpful to use terms like 'author', 'publisher', 'editor' and 'mapmaker', but what may be more important in a study of atlases is to acknowledge the varied meaning of these strict categories in specific texts and in different contexts in conjunction with how processes of authoring, editing, publishing and mapmaking were conducted and by whom. As Foucault considers, 'we must locate the space left empty by the author's disappearance, follow the distribution of gaps and breaches, and watch for the openings that this disappearance uncovers'.[145] If we recognise the human interactions involved in authoring, we can begin to understand that whilst the author is not dead, the idea of the author as a single entity is rendered obsolete. 'Author'/'authorship'/'authoring' was a *process* serving particular functions in school atlases at the hands of different individuals.

Atlases were also 'authored' in the light of their intended and actual audience and it is to this that we turn next in order to facilitate further consideration of 'the labours [and background] of those actually involved in printing, publishing, and reading' school atlases.[146] The next chapter explores how atlas style and content were encompassed within the pedagogy of 'regional geography' as producers attempted to meet readers' needs in distinct local sites across Britain.

[145] Foucault (1989), 283.
[146] Johns (2002), 262.

5

For British audiences: representations of the regional approach in school atlases

Introduction

The teaching of geography in schools was characterised by the pedagogy of presenting the world starting with the parts pupils had close contact with—the 'known'—and proceeding to those 'unknown' places unlikely to be experienced in person. My concern in this chapter is how this regional approach in geography shaped the style and content of school atlases for pupils in distinct parts of Britain. This approach to geographical education was disseminated by geography's professionals in the meetings of leading geographical societies and in their journals, but it was also interpreted and translated by teachers in specific sites across the UK, using particular methods, like fieldwork, and through specific texts, including school atlases. In this chapter I turn first to an overview of regional geography as it was then understood and practiced by both geographers and teachers of the subject, and to the exchange of knowledge and methods between these groups who were working and writing in distinct educational settings.

The part school atlases played in the teaching of geography regionally is also evident by conducting what McGann has called a materialist hermeneutics of texts: the order of maps and the stylistic and prefatory features of atlases were made to appeal to readership in specific local settings, but such a study of material features must be paralleled with recognition that 'texts represent—are in themselves—certain kinds of human acts'.[1] In the light of this, I recognise the institutional networks through which school atlases for specific UK settings were made relevant and credible to teach pupils in these places about their 'home' and about the Empire and world as a whole. I will show that school atlases for particular UK settings were bound up in associations between mapmaker-publishers—with their specific agendas about sale and profit—and particular educational and geographical bodies, whose

[1] McGann (1991), 4.

opinions on the nature of geography and on their responsibility for geographical education differed both between institutions and among their individual members. I consider these aspects of atlas production in relation to the *London school board atlas* (1900), the *London school atlas* (1900), Johnston's proposed atlas, and an RGS atlas that never was—each intended for pupils in distinct parts of the UK.[2]

The pedagogy of *Heimatkunde*: from 'known' to 'unknown' parts

The style and content of school atlases for distinct audiences across the Empire were informed, in part, by the dominant geographical pedagogy which stated that pupils should learn about the globe by starting with the parts they knew best—their home village, town, city, county (or province), country, and continent—and progressing from there to lesser known parts. This allowed pupils' geographical knowledge to evolve from an understanding of what was near at hand to knowledge of, and so familiarity with, what was far away and, in most cases, unlikely to be known or experienced in person. This relative geographical emphasis was observed by Keltie in the German system of geographical education in 1884, during his study of geography on the continent (see chapter 2). Keltie's 1885 report assessed geographical education in British schools in comparison to teaching on the continent, highlighting the superiority of German geographical teaching . The German pedagogical discourse of teaching geography from near to far—known as *Heimatkunde*—proceeded, as Keltie indicated, 'from the town or immediate neighbourhood to the district, then to the province, and so outwards to Germany, Europe, and the other parts of the world, in five classes'.[3] The regional approach, however, was not simply a method used to organise the cognitive content of geography lessons by scale and proximity: it also, as I show below, shaped the nature of the methods (such as fieldwork) and the apparatus (including atlases) used to teach geography.

Emphasis on the known to unknown approach, and on the 'home region' in school geography was part of broader discussions among geographers about the 'regional' character of the discipline—the regional approach being both a specific

[2] *London school atlas* (1900, London: London School Atlas Company).
[3] Keltie (1885), 40. There is no literal English translation of *heimatkunde* but it refers to 'home studies', which still structures German school lessons in history, geography and other subjects today.

intellectual field (becoming known as 'regional geography') and a discursive practice (evident in the predominance of fieldwork and surveying among its practitioners). A concern with regions was apparent in Herbertson's and others' ideas about studying the world according to its natural divisions in climate, race, politics and economics (see chapter 4). Regional geography not only provided a way to know the 'home region', but it was another strategy attached to comparative discourse. It relied on designating and describing countries and people according to their distinct regional character. My purpose here is not to provide a history of regional geography but, rather, to consider how ideas within it were connected to the ways geography was taught, more generally, by teachers in the class room; how this was manifest in fieldwork and surveying activities; and, more specifically, and in greater detail, to understand how the regional approach influenced, and was shaped by, the production of school atlases for users in local parts across the UK, manifest in atlas style and content and in the associations between publisher-mapmakers and educational and/or geographical bodies.

Training citizens and teachers in regional geography

The regional approach was manifest in various guises in geographical thinking. For H. J. Fleure, for example, active in the GA, it became a moral discourse framing Welsh national identity.[4] Fleure's regional geography was connected to Welsh 'back to the land' projects, motivated in part by a belief that the Welsh countryside was home to a moral and upright race in opposition to the industrialised and squalor state of England's urban parts. Fleure's activities in systematising 'Welshness' through his surveying of racial attributes in Wales between 1905 and 1915 were motivated less by this dichotomy between country and city and were founded more on the idea of a 'utopian fusion' of past and future, tradition and modernity. This allowed for 'hybrid national identities' and was shaped by Fleure's understanding of the environment, less as a determinant in human character than a factor upon which the human will could act with varying success. Attributing less control to the environment meant that Fleure modified Herbertson's 'natural regions' to 'human regions', so challenging others' emphasis on the control of climate and, what he

[4] Gruffudd (1994).

believed were imagined race types (see chapter 4). As Gruffudd puts it, Fleure's concern with the rural was 'an attempt to theorize the perceived spiritual importance of the remote rural areas and their peoples, seen as wellsprings of civilization', thus revealing that Fleure's 'regionalizing ritual' was also a moral one.[5]

The moral topography within which Fleure situated his theories about Welsh hereditary history was in line with some of his contemporaries, namely the ideas of social scientist, geographer and educationalist Patrick Geddes, who based his work on the moral and societal value of knowing one's own place in the world. Geddes' way of seeing was immediately evident in his securing, with the assistance of Herbertson, the Outlook Tower in 1892 on Castle Hill in Edinburgh (Fig. 5.1).[6] This was, to all intents and purposes, a museum and an educational tool in Geddes' campaign to encourage a certain type of geographical citizenship and to secure a synoptic, analytical and, above all, regional view of participants' local environment.

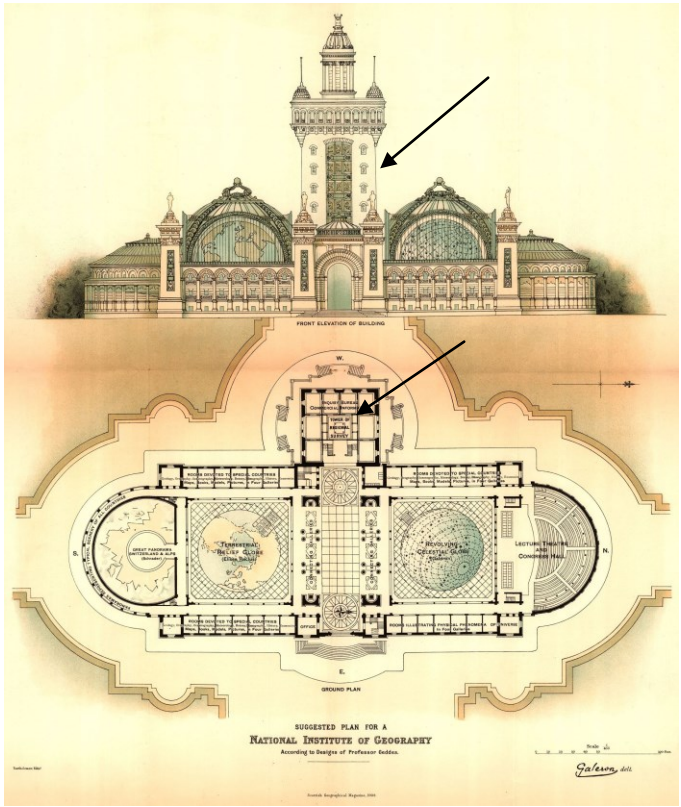


Figure 5.1. Geddes' Outlook Tower. As well as the Outlook Tower on Castle Hill, Geddes was keen to establish what he called a 'National Institute of Geography in Scotland' to foster civic geographical study of the world. This plan, engraved by J. G. Bartholomew and designed by French architect Paul Galeron, never came to fruition but it presents a prototype of Geddes' Outlook Tower in Edinburgh (shown by the black arrows) (Source: Geddes (1902a)).

[5] Gruffudd (1994), 66.
[6] The building Geddes purchased had already been utilised in a technically similar, although conceptually distinct way by the daughter of an astronomer Maria Short, who created an observatory and camera obscura, the latter becoming a focus of Geddes' Outlook Tower (MacDonald, 2011).

For British audiences

For our purposes here, it is important to recognise, as Maddrell and Walford have, the connection Geddes' work had to the regional approach in geography and the broader regional discourse permeating sociology at this time.[7] French sociologist Frederick Le Play's regional surveying activities shaped Geddes' perspective and both individuals were inspired by one another's surveying activities. Le Play was the founder of the Le Play Society in Paris in 1920 and he instigated the Le Play House Tours in 1921. On these tours, groups of peripatetic Europeans traversed France observing and surveying the landscape under the notion of adopting a particular sensitivity towards the environment, the main determinants of society taken to be 'Lieu—Travail—Famille'.

For Geddes, Le Play's idea of 'Place—work—folk' formed a central aspect of the Outlook Tower. The Tower descended, floor-by-floor, from Edinburgh, Scotland, Empire, Europe and the World. The top of the tower held the camera obscura—an instrument of personal observation—which enabled voyeuristic interaction between the Tower's participants and people on Edinburgh's streets and, in Geddes' own words, the Tower was 'comparatively arranged, as far as may be, through its descending storeys (of Prospect, City, Scotland, Empire, Europe, World)'.[8] Through each stratum of the tower, visitors' eyes were drawn outward towards the city, Empire and world and were incorporated, whether consciously or not, into the activity of regional survey. As MacDonald notes, 'after passing a dozen landings, the breathless students . . . would emerge . . . on an open roof terrace from which cityspace and countryside extend in every direction'.[9] Visitors to the Tower became part of Geddes' experiment to change the whole cultural context of the city by promoting new social relationships through practical activities.[10] In a leaflet sent to John George Bartholomew about the Tower in Edinburgh, Geddes revealed the impetus for his project in this city:

> For many years Edinburgh has been the greatest world-centre for diffusing geographical knowledge through the medium of maps and atlases of eminent firms of Johnston and Bartholomew . . . but while this is so there are practically no facilities either for the student's researches, for the merchant in his enquiries, or for the ordinary citizen, desirous of guidance towards an

[7] Maddrell (2009); Walford (2001).
[8] Matless (1992); Geddes (1898), 585.
[9] MacDonald (2011), 269.
[10] Meller (1990).

> understanding of the problems and possibilities of his civic and political life.[11]

Geddes' Outlook Tower was an instrument used to civilise the public who engaged with it; it enabled Edinburgh locals to know better their place in their 'region' and in the world as a whole.

The Outlook Tower was also a physical representation of *Heimatkunde* (or home/local studies) and 'an experiment in the teaching of geography'.[12] Geddes, Le Play, Herbertson, Keltie and Fleure were among those shaping how this discourse, which linked the local with a particular moral character and notion of citizenship, was conceptualised in the teaching of geography in schools. The implementation of this pedagogy of regional geography in schools has been addressed by Maddrell, examining the role of Oxford Summer Schools in establishing Oxford's central role in the shaping of the discipline.[13] Summer Schools were for intending or existing geography teachers and they were conducted by figures like Fleure, Geddes, Herbertson, Keltie, L. W. Lyde, H. J. Mackinder, C. Fawcett, and H. R. Mill.

This exchange of knowledge and practice was not limited to Oxford nor was it simply an exchange *from* University professionals *to* geography teachers. Extension courses beyond Oxford, employing a regional focus, also operated, including the Yorkshire Summer School of Geography, set up in 1913:

> By the Universities of Leeds and Sheffield, in co-operation with Armstrong College, Newcastle-upon-Tyne; with the help of the Education Committees of the County Councils of the North, West, and East Ridings of Yorkshire; and the assistance of the County Boroughs of Bradford, Huddersfield, Hull, Leeds, Middlesbrough, Sheffield, and York.[14]

In the same year, a Summer School at Aberystwyth provided teachers with practical classes in 'simple survey work', and in Edinburgh similar lectures for teachers were held in Geddes' Outlook Tower and, according to Geddes' report to Bartholomew, these courses were equal in success to the Oxford summer schools:

> In August each year the Outlook Tower becomes the centre of "The Edinburgh Summer Meeting which is now in its 13 session. This is a gathering of teachers, students and workers from all parts of the world for the

[11] NLS, Acc.10222, Business Record 922, Incoming correspondence, Leaflet by Patrick Geddes about his Outlook Tower, sent by anonymous (possibly Geddes) to J. G. Bartholomew, undated.
[12] MacDonald (2011), 271.
[13] Maddrell (1998).
[14] Anonymous (1913a), 382.

> more living and unified study of scientific, educational, social and political problems and is numerously attended.[15]

Various geographers, including those originally running Oxford's summer school, also entered into extension lecturing, travelling between universities and teaching colleges to instruct teachers in the 'best' methods in geography teaching: Mackinder thus commented in 1921 that after his 1887 paper and his appointment to reader at the University of Oxford, he had thrown himself into extension lecturing 'and in three years travelled 30,000 miles and taught several thousand pupils, many of them elementary teachers and students in training colleges'.[16]

Also delivering courses as part of the Oxford Summer School and those courses held elsewhere were female geographers, such as Herbertson's wife and writer of school texts Frances D Herbertson; Marion Newbigin, editor of *The Geographical Journal*; and Ellen Rickard, lecturer in geography at the Maria Grey Training College, London.[17] At the 1903 Vacation Course in Edinburgh, the subject in question was "Edinburgh and its Region considered as a Type". Contributors were made up of a number of female professionals including Newbigin, who spoke on surveying the Forth; Miss Von Wyss from Cambridge Training College, who gave a talk on fresh water life; and Miss Alice Ravenhill, who spoke about school hygiene. The course also incorporated a lesson by the Principal at Croft School, Newcastle, Miss Hodgson, on nature note books.[18] Female teachers were also actively engaged in imparting the regional approach both to pupils and to intending and existing teachers. The Summer School of Civics in Dublin in 1914 included a presentation by Miss M. March on her experience of 'The use of the home region in geography courses in secondary schools', delivered in conjunction with other lessons from Geddes, Fleure and Fawcett on regional surveying.[19]

These summer schools and lectures facilitated, as well as being driven by, the relationship between school and university geography. Maddrell indicates that 'as geography emerged as a university discipline, school teachers were the main

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[15] Anonymous (1913b); NLS, Acc.10222, Business Record 922, Incoming correspondence, Leaflet by Patrick Geddes about his Outlook Tower, sent by anonymous (possibly Geddes) to J. G. Bartholomew, undated.
[16] Mackinder (1921), 378.
[17] Maddrell (2009).
[18] Anonymous (1903a).
[19] Anonymous (1914).

constituency for geographical training'.[20] The involvement of female geographers and teachers in delivering the Summer Courses illustrates not only an often neglected female presence in geography's progress, as Maddrell has shown, but it also reveals the more complex connections between those (both male and female) teaching in the universities and/or writing in the journals of the leading societies and individual teachers attempting to put regional geography into practice in British schools. The lectures given at the Summer Courses indicate that not only were teachers the main clients, *per se*, of University professionals but they were also often those instructing Course attendees about methods in teaching geography regionally.

The regional approach in school fieldwork

This link between university and school geography also infiltrated organised national surveying activities, often highlighted by geographers and others as an important method in teaching geography regionally. In 1902, Geddes campaigned for the adoption of 'nature study' in schools, highlighting 'the use of the immediate regional excursions towards building up ideas of the larger world in its landscape and vegetation, in realising its scenes, even of apparently unfamiliar elements.[21] Such activities were in line with the 'outlook' perspective facilitated by Geddes' Tower. The Land Utilisation Survey (LUS) of Britain coordinated by Dudley Stamp between 1930 and 1934 was also an attempt to inspire school children and teachers' surveying of their schools' surroundings.[22]

Smaller scale and localised surveying activities were also being carried out by school teachers in their particular schools. The ideas and methods discussed and demonstrated in popular societies, in the universities or teacher training colleges, and through vacation courses were being negotiated by teachers at the local scale. Ploszajska has illuminated the role of individual teachers, teaching geography in London schools (1870–1944), in the interpretation of geographical ideas and, specifically, texts, and their part in the popularising of the field trip and regional surveying as a method in geography teaching.[23] The role of Geddes, Fleure,

[20] Maddrell (2009), 128.
[21] Geddes (1902a), 534.
[22] Ploszajska (1998).
[23] Ploszajska (1998; 1999).

Herbertson and others in promoting and framing regional geography was thus shared by many less well-known geography teachers, whose experiences of teaching geography regionally were recorded in the pages of *The Geographical Teacher,* and it is to these accounts that I briefly turn before focusing specifically on the regional approach in school atlases.

Fieldwork in British schools took the form of class excursions in the locality of the school or, sometimes, entailed longer trips to 'unknown' parts of the county in which the school resided, or even consisted of longer outings to the next county or to other parts of the UK. The use of fieldwork and trips in school geography became more widespread as the twentieth century progressed and, according to Walford, even more so after World War I since the previous imperial focus of geography lessons became increasingly international, although remaining tied to an imperial future, which started at the home level; this change was also reflected in school textbooks.[24]

Even before the war, however, the 'outlook' approach to geography was evident. Fieldwork was interpreted by many teachers as a way to know first one's own land and progress from here to other 'unknown' parts of the world. Taking her London students to the Valley of Brent to the West of the city in 1910, Miss Matthews reported her object to be 'not merely the study of Home Geography or local condition in detail, but also to gain from things themselves a knowledge of geographical features, and to form a fund of experience, a basis of known fact, upon which we could draw when studying other and unknown regions'.[25] Matthews' 'known to unknown' approach through fieldwork echoed Geddes' reasoning for the Outlook Tower, which according to him 'makes possible a gradual widening study of the world, beginning with the region at one's feet, and passing from city to country, from country to Empire, from Empire to Europe, and from Europe to the world'.[26]

Miss Matthews overcame the practical problem many teachers faced in translating regional survey and fieldwork into everyday geography lessons, that is, she utilised the small patch of green in her school's urban location, the ideal scenario

[24] Walford (2001); Maddrell (1998); Ploszajska (1998).
[25] Matthews (1910), 314.
[26] NLS, Acc.10222, Business Record 922, Incoming correspondence, Leaflet by Patrick Geddes about his Outlook Tower, sent by anonymous (possibly Geddes) to J. G. Bartholomew, undated.

being a countryside location where pupils could easily ramble through nature. This was not a problem for geography teacher Joan B. Reynolds at the Girls' Intermediate School in Cardiff, Wales. Just as Keltie drew upon his experience of *Heimatkunde* and fieldwork in German schools, Reynolds based her paper in 1901 on her visits three years earlier to Swiss schools. Reynolds demonstrated the successful application of 'class excursions' in Swiss schools and highlighted her own positive experience of taking 'a dozen girls to make maps of a lake in a neighbouring park' in Cardiff.[27] At the same time as Fleure was promoting the regional approach and local surveying at the University of Aberystwyth, and other geographers like Herbertson were teaching this method to Geography undergraduates at the University of Oxford, Reynolds was encouraging other teachers in England and Wales to follow her example of teaching geography regionally through local excursions. Whilst Reynolds had possibly never been to Geddes' Outlook Tower, she alluded to its premise in her description of leading 'parties of girls to the top of a hill, about five miles from Cardiff, where we obtain a good bird's-eye view over the coast and Channel': just as Geddes described the view from his Tower as providing the 'view of the surrounding city and country' so Reynolds found such a perspective from the top of a local hill.[28]

Some teachers, like the Reverend C. H. Cox, overcame their more urban location with day trips to the surrounding countryside, taking his geography class of boys and girls from Upholland Grammar School, Manchester to the Mid-Pennines in 1911—an outing organised by the Manchester Branch of the GA.[29] Others made use of what little green space was available nearby, geography teachers in London taking advantage of their school's walking distance to Hampstead Heath.[30]

Field work was, however, not only a way of engaging with nature but, like Geddes' Tower, it was also sometimes used as a 'civilising' activity. This was the incentive for a project conducted by teacher Valentine Bell in 1911 at Lollard Street London County Council School. Describing the survey his 'boys' conducted of Lambeth (Central London), which was exhibited, along with other schools'

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[27] Reynolds (1901), 34.
[28] NLS, Acc.10222, Business Record 922, Incoming correspondence, Leaflet by Patrick Geddes about his Outlook Tower, sent by anonymous (possibly Geddes) to J. G. Bartholomew, undated; Reynolds (1901), 34.
[29] Cox (1911).
[30] Ploszajska (1998).

contributions, at the Town-Planning Exhibition in Chelsea, the moralising and civilising benefits Bell believed the survey gave to his students are unequivocal:

> I think if survey work only makes the boys loathe dirt and squalor it is not at all wasted . . . How much could be accomplished, I wonder, if every boy, say at Eton, Harrow or Cheltenham, was taken round his school district, even into the slums, in order to become acquainted with his environment. You would have, I am sure, a much better citizenship, and it would count for a good deal in the life of a nation.[31]

Bell's statement supports Ploszajska's suggestion that such 'fieldwork was most highly valued for its social, moral, and civic benefits, rather than for its contribution to geographical education, narrowly defined', and this echoes Matless's view that 'local observation and study would generate good local, national, and world citizenship'.[32]

Concerns with citizenship, therefore, underlined students' surveying activities but this moral agenda was often emphasised to varying degrees depending on the teacher conducting the fieldwork. If we look more closely we can see that, in reality, the distinction between a civilising motive and an educational one in the conducting of fieldwork and survey was blurred. In some cases, stress was placed on teaching surveying techniques in order to foster expertise in geographical knowledge, which was of course seen as conducive to making 'good' citizens. This was the case at the County School at Harrow, London where Ernest Young carried out fieldwork with his pupils in order to help them 'visualise the maps of regions unvisited, and to give definiteness to his [the pupil's] ideas of distance, direction, scale, and so on'.[33] Whilst Young was not particularly concerned with 'accuracy', he still believed the 'main object in this particular work is to reinforce geographical ideas'. The same was true for J. Deas and F. Mort who taught, respectively, at Uddingston Grammar School in South Lanarkshire, Scotland and Allan Glen's School, Glasgow. Deas and Mort gave details in *The Geographical Teacher* of a survey jointly conducted at the Calderbraes Golf Club, Glasgow. For them, this was not so much a matter of producing accurate maps than a way 'to impress upon the minds of the pupils the general principles that lie at the root of scientific map production'.[34] Learning map

[31] Bell (1911), 166.
[32] Ploszajska (1998), 757; Matless (1992), 472.
[33] Young (1915), 47, 49.
[34] Deas and Mort (1909), 90.

skills was an important part of the UK National Curriculum since the 1880s and fieldwork provided a method to illustrate the effects of scale and projection on representations of local landscape features.[35]

The regional approach, at both university and school level, was informed by particular ways of seeing the world and by specific methods in geographical teaching. School teachers were disseminating ideas about regional geography, translating and modifying in the class room the knowledge they read about and heard according to their pupils' particular needs and, often more so, their school's specific location. This outward-looking approach to geography teaching provides an important link to the production of school atlases, which were another 'device' used to teach geography from known to unknown parts of the globe.

School atlases in the regional approach

School atlases were sometimes used to supplement fieldwork by imparting knowledge of the local and the global before excursions began. Geography teacher Young encouraged the use of maps and atlases while pupils were in the field since they provided a check on any hand drawn maps and gave an impression of how maps were made: he urged his pupils to interact with maps while doing fieldwork, seeing outdoor work as a way to 'examine a map in the open air, and see how the landscape corresponds to the thing that someone else has done and put on paper'.[36] Pupils were in conversation with their environment and, concomitantly, with the map and/or atlas, and this link between observation and reception (map reading) mimicked the practice of natural scientists, who often observed nature with book in hand.[37]

Other geography teachers relied on observation to supplement the 2D and static character of the map and atlas left behind in the class room: Katherine Wallace, teaching at Peckham Secondary School, considered how during a trip to the River Poole, London 'when actually standing on the banks of a river . . . the child can more easily visualise, and less easily forget, the busy trade which might arise at this

[35] Maddrell (1998).
[36] Young (1915), 47.
[37] Daston (2004).

point if the rivers were navigable than she can when surrounded by four walls she gazes on two thin lines meeting one another on a wall-map or atlas'.[38]

A notice circulated by the GA in 1929 on geography in continuation schools (beyond the elementary stage) encouraged this dialogue between self-observation of one's environment and reading maps or atlases, suggesting that to teach 'local study' and knowledge of 'distant lands' concurrently each school required 'an adequate supply of atlases, pictures and books of reference'.[39] Teacher M. C. March similarly demonstrated in 1914 how 'the place of the home region in the school curriculum' (of a secondary school in Edinburgh) was taught through: trips to the Water of Leith, the Pentlands and other local sites; the use of school atlases to locate the countries where Edinburgh's commercial imports were sourced; and, finally, by lessons on 'the world and its discovery . . . in relation to the town and its supplies'.[40] Such 'pupil-centred' approaches were also dominant in school textbooks, often using adventure stories and family life as analogies of imperial and geographical relations.[41] Reading (atlases) and observing (the local landscape), whether done in sync or separately, were mutual practices in the teaching of geography from a regional, namely local and imperial, perspective.

School atlases were in this sense part of general 'apparatus' used to promote regional study and their style and content were informed by this focus and emphasis on local observation. This was the opinion presented by geography teacher W. J. Barton's in 1914. Barton's paper on 'What should be in a school atlas', stated that every school atlas should be divided into four parts: one devoted to world maps and world charts, the second to the home country, which, he noted, is very seldom done, and the third and fourth parts should deal with the rest of the world.[42] Barton was at this time on the British Association for the Advancement of Science's Section E committee to investigate the 'Atlas, textual, and wall maps for school and university use' (see chapter 3) and his conclusions in 1914 were probably informed by, and influential in, what was to come in the committee's 1915 report.

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[38] Wallace (1908), 236.
[39] SCRO, GA, 1988/60, Item 31, Manuscript of notice on 'Geography in continuation schools', 1929, unpaginated.
[40] March (1914), 596.
[41] Maddrell (1998), 97.
[42] Barton (1914), 241.

For British audiences

For Barton, the ordering of maps in an atlas should be connected to the location of intended audiences and to the discourse that the world was divisible and understandable by looking at it from the known to lesser known regions. The local, however, looked different to different people. Just as field trips were adapted to the specific locale of participants, school atlases encompassed the idea, as Matless puts it in relation to surveying, of constructing an 'exhibition of where you are in the world'—a 'home-picture', which depended specifically on the intended audience.[43] Distinct variations of *Heimatkunde* were therefore represented in British atlases depending on pupils' local settings across the UK (and also throughout the Empire beyond Britain, namely India, Australasia, South Africa and Canada, which we will look at in chapter 6).

School atlases—their style and content—were thus never fixed objects: I have shown that in chapter 4. This geographical sensibility of print is also elucidated in Geertz's assertion that 'texts' (in the form of art in his case) can be made to move from one place to another, from one culture to the next, and by Said's 'travelling theory', which states that for knowledge to be acculturated in a distinct place it must go through transformation as it moves from one place to another.[44] This again complicates the fixity of knowledge in print form: the very mobility of texts, moving between places and cultures, is in fact facilitated not by their standardised form, as Eisenstein supposes in her idea of the fixity of print, but by a text's ability to be transformed.[45] My interest here is with how school atlases were so transformed for people in distinct locations across the UK.

Two approaches were used in the production of school atlases to allow for this 'translation' of geographical knowledge to users in specific locations. One was the modification of existing school atlases for distinct audiences by the insertion of supplementary maps of intended readers' particular country, county or city, either at the front or the rear of the atlas. The second method used was the production of an entirely 'new' atlas. Such atlases were structured to ensure that readers' country of residence received greater map coverage than other countries represented in the atlas. Map order was also important here: maps of the location in question were

[43] Matless (1992), 478.
[44] Geertz (1983), 12; Said (1983), 157.
[45] Eisenstein (1983).

strategically positioned at or near the beginning of atlases. A hierarchy or relative positioning of countries therefore existed in any one atlas based, in part, on the geographical location of intended users. These atlases were thus not only tools in regional observation through their use in fieldwork, but they also facilitated and influenced the teaching of this 'local' perspective in the class room.

Atlases for local audiences: the role of local educational authorities and geographical institutions

The utility of knowledge in distinct locations relied on its circulation between various sites of production and this was, at the same time, reliant on communication between different atlas producers. In order to illustrate these points, in this section I consider the county, city and national editions of school atlases for pupils in the UK and the institutional networks on which they depended. These 'local' atlases were influenced, I suggest, not only by the epistemology of the known to unknown pedagogic approach (outlined above) but by the activities of particular institutions responsible for the promotion of geography among the general public and in schools. School atlases for specific local settings in the UK were also informed by particular local educational authorities' attempts to control the nature of geographical knowledge taught in their schools.

The emphasis on home study in teachers' accounts of fieldwork in British schools was evident in the county and city editions of school atlases. A focus on Welsh surroundings in Reynolds' description of fieldwork at the girls' Intermediate School in Cardiff (above) is apparent in the school atlases, whilst small in number, modified specifically for Welsh pupils (in English), including George Philip's *Elementary atlas of comparative geography* (1904).[46] This atlas was an adaptation of an original atlas, reproduced in nine other editions between 1900 and 1930: the atlas was published for the London School Board; Birmingham and the Midlands; South Lancashire; Yorkshire, West Riding; Northumberland; Wales; West of Scotland and Glasgow; and Aberdeen (on the re-production and repackaging of atlases see chapter 3). These different atlases were largely the same, apart from the addition of supplementary maps of readers' respective cities and counties (Fig. 5.2). In the

[46] Reynolds (1901).

Welsh edition, therefore, the introductory plates consisted of a map showing the geography of Wales with insets of industrial districts and a plate with four maps of Wales showing rainfall, geology and mineral resources, density of population, and political features.[47] The local climatic, industrial and population statistics provided in the introduction, and illustrated in the atlas maps, would have facilitated a study of Wales' local surroundings, such as Reynolds' fieldwork in Cardiff.[48]

Figure 5.2. Map of St. Helens district (Source: *Philip's elementary atlas of comparative geography,* Lancashire edition, 1924, inside of front cover). Reproduced by permission of the Trustees of the NLS.

National and institutional distinctions in geographical education, 1870–1930

The practice of localising school atlases in this way was itself bound up in national distinctions, and it is the production of atlases for English audiences that forms my focus in this section. English county and city atlases were larger in number than those for Scotland, Wales and Ireland. This can be explained by looking at the production of these atlases in relation to the institutions involved in the administering

[47] *Philips' elementary atlas of comparative geography*, Welsh edition (1904), iii and iv.
[48] Reynolds (1901).

of geographical education for English and Scottish pupils. First I shed light on distinctions in geography's progress between Scotland and England, which framed atlas production, by contrasting the activities of particular English geographical and/or educational institutions with their Scottish counterparts, and then I will go on to reveal how these differences in approach among geographical bodies were manifest in the production of specific school atlases for English pupils.

Scotland's educational system was, and remains, apart from England's, but geography's experience in Scottish schools held both similarities and differences vis-à-vis its development in English schools. National differences in school geography were evident in Keltie's 1885 report to the RGS on the state of geographical education in Britain and on the continent. Concomitant with Keltie's conclusions on the deprived state of British geography in comparison to the subject's teaching on the continent, specifically Germany, was his acknowledgement of the position geography held in Scottish schools. Keltie reported that Scottish geography at the secondary school level was in a slightly better position than English geography with regards to the number of hours committed to it and the organisation of the teaching programme: Keltie found the most complete programme of geography in the Glasgow Academy where 'geography has always held such a high place among subjects of school study in Scotland that it is taught in the Glasgow Academy neither as compulsory nor optional, but as a matter of course'.[49] Keltie also described how the boys of Robert Gordon's College, Aberdeen were taken 'out to the country and in a simple, rough, but effective, and to them interesting and instructive way . . . taught to draw maps of a small area for themselves'.[50] If we base our interpretation on Keltie's report, Scottish schools met more of the methods and activities he praised in German schools—namely *Heimatkunde* and fieldwork or observation and map reading—than the English schools he visited.

Less positively reported on were developments in Scottish geographical education post-Keltie's influential report. This can be demonstrated through the case of the Scottish branch of the GA. Whilst the GA's attempts to improve the teaching of geography in England and Wales were met with widespread support among English teachers and educationalists, the Scottish branch of the GA failed to develop

[49] Keltie (1885), 15, 89.
[50] Keltie quoted in Walford (2001), 104.

past its nascent state. In 1899, the committee of the principal branch of the GA received correspondence from Scottish Branch secretary G. C. Harrison, reporting that 'little more could be done in Scotland [by the GA] at the present time'.[51] A dominant view among RSGS members was that Scottish geography suffered from a lack of 'apparatus'. Such an argument was propounded by Scottish educationalist Thomas S. Muir in 1911. For Muir, the 'great impediment' to Scottish geographical education was the Scotch Education Department's (SED) and the School Boards' limited funding and provision for appropriate apparatus in geography class rooms. Muir found that 'good text-books and good maps . . . were difficult to acquire', a view shared by the 1895 BAAS sub-committee, given the task of examining the 'Position of geography in the educational system of the country (Scotland)', conducted by geographers involved in the GA, RGS and Manchester Geographical Society (MGS): these included Halford J. Mackinder (as chair), with A. J. Herbertson (as secretary), and H. R. Mill, J. S. Keltie, Ernst G. Ravenstein and Eli Sowerbutts.[52]

The limited success of the GA in Scotland, however, was followed by the formation, under the auspices of the RSGS, of an Association of Scottish Teachers of Geography (ASTG). The object of this society, echoing the GA in England and Wales, was stated as 'discussing such problems as may arise in connection with the status of the subject [geography], and generally to promote the teaching of geography on modern lines'.[53] The ASTG responded in 1912, along with the RSGS, to the SED circular 365, which stated geography's omission, along with History, from the Higher Leaving Certificate in Scottish secondary schools.[54] The deputation sent by the ASTG and the RSGS received a positive response from the SED's secretary 'Mr MacDonald', who reassured the RSGS Council that 'the department had already been considering giving a more favourable position to geography in the intermediate

[51] SCRO, GA, 1988/60, Item 98, Committee Minute Book Volume 1, 1893-1912, 18 November, 1899.
[52] Muir (1911), 536; BAAS, Item 330, Appointments to committees, 1888–1916, appointing of committee to 'the position of Geography in the Educational System of the country', 1895.
[53] Anonymous (1912b), 320. Like the Scottish branch of the GA, the ASTG was short lived, members releasing a statement in 1917 reporting its cessation owing to the effects of the war on an already dwindling membership (Anonymous (1917), 566). An equivalent organisation—specifically for geography teachers—was not formed in Scotland until 1970 under the Scottish Association for Geography Teachers (SAGT), which still exists today.
[54] Royal Scottish Geographical Society (RSGS), Council Minutes 10.4, 1904–1920, Minutes by Dr John Horne, 12 March 1912.

stage in accordance with one of the requests made by the deputation'.[55] Two years later in 1914, however, Muir encouraged the Council to once again attract the SED's attention toward a report presented by another special BAAS Sub-Committee at the 1913 Birmingham meeting on 'the present position of geographical education in Scotland'.[56] In this report, the BAAS committee uncovered a lack of suitable apparatus in Scottish schools and believed 'pressure should be brought to bear upon School Boards by inspectors (of schools) or by other means to equip their schools with at least modern text-books and physical wall-maps'.[57]

Historians of Geography have drawn attention to the locational nature of geography's development and to the distinct character of the RSGS from other provincial societies and from the RGS specifically: one differentiating feature was the greater emphasis placed in the RSGS on promoting school education at a time when other societies (including the RGS) were concerned predominantly with exploration.[58] The position of geography in English schools, however, was discussed along similar lines to what we have seen in relation to its Scottish counterpart: a focus was placed on the status it held among other subjects, its treatment by the Education Department, and the provision of apparatus (including textbooks, maps, atlases, globes) necessary to teach geography along proper lines, namely the regional approach. The Board of Education's (BOE) neglect of geography in the 1917 Advanced Courses regulations for Secondary schools in England, echoing the SED's pervasive indifference to geography, caused similar outrage among geographers: Lyde, in a letter to RGS secretary Arthur Hinks, referred to 'the anti-geography idiots of the Board'.[59] But the distinction between the RGS and the RSGS is evident in the different response these similar problems in geographical education engendered from the RGS.

In 1917, in response to the absence of geography in the BOE's Advanced Courses, Hinks was approached by GA secretary Fleure and by Sowerbutts, at this time secretary to the Manchester Geographical Society (MGS), over the formation of a joint committee made-up of RGS and GA representatives—an action that would

[55] RSGS, Council Minutes 10.4, 1904–1920, Minutes by Dr John Horne, 20 June 1912.
[56] RSGS, Council Minutes 10.4, 1904–1920, Minutes by Dr John Horne, 20 January 1914.
[57] Anonymous (1913c), 605.
[58] Lockhead (1982); Mackenzie (1995); Withers (2001b).
[59] RGS, CB8/55 1914–1920, Lionel W. Lyde to Arthur R. Hinks, 10 July 1920.

have paralleled the ASTG and the RSGS's combined effort against the SED in 1912.[60] The report Hinks gave of Fleure's intention to RGS president Thomas Holdich, however, epitomised the apprehension the RGS displayed towards that 'very shadowy sort of thing . . . "human geography"' to which, according to Hinks, Fleure subscribed.[61] Hinks' reaction was bound up in his opinion that geography was first and foremost a study of the earth's physical features, not one concerned with the study of economic, political and other human activities.

Hinks' suspicions about 'human geography' professed to many geographers' opinion over the RGS's long-run indifference towards this field of the discipline and the society's favouring of individuals and research that focused on its traditional physical side; a bug-bearer that had come to a head in 1912 when then BAAS president Charles F. Close expressed in his presidential address the view that geography, based on the RGS' activities and writings, was namely about exploration and mapping and could in the end not be considered a science in the same way that subjects like chemistry and geology could.[62] Reactions to the RGS and to what was seen as a threat to geography's 'scientific' status were, in part, responsible for the formation of the Institute of British Geographers (IBG) in 1930.

For my purpose here, it is evident that whilst the RSGS and the ASTG were united in their campaign to promote geography, members of the RGS, the GA, and the MGS—three geographical societies in England—were at odds on what approach should be taken to facilitate geography's progress in the schools and on the type of knowledge to be promoted. Geography's character was thus not only nationally distinct, between England and Scotland, but its nature within England at the hands of different institutions was also disparate. In the remainder of this chapter, I suggest that belonging to Darton's communications circuit—which you will recall conceptualises the movement of a book from author, editor, publisher to reader (see chapter 2, 22)—is another category of 'institution', whether educational and/or geographical. I illustrate this by drawing on particular English institutions or bodies

[60] RGS, CB8/32 1915–1919, Hinks to Holdich, 16 July 1917; RGS, CB8/32 1915–1919, Hinks to Sowerbutts, 4 December 1917.
[61] RGS, CB8/32 1915–1919, Hinks to Holdich, 16 July 1917.
[62] Withers (2010), 206.

and their interactions with publishers, mapmakers, and editors in the production of specific school atlases for pupils in 'local' English settings.

The School Board for London and the London school board atlas (1900)

This is evident in the role which the School Board for London (SBL), also known as the London School Board (and later the London County Council (LCC)), played in the production of an atlas specifically for London schools. The SBL was the local educational authority for the London Metropolitan area. The *London school board atlas* (1900) was a collaborative project between the SBL, George Philip and Son, and the GA. The title page revealed the 'assistance rendered by the London School Board in the preparation of this atlas, both by the recommendation of the Special Advisory Committee, and also by the substantial arrangement afforded by their guarantee'.[63] The atlas was another edition of *Philip's elementary atlas of comparative geography* (1900), the local editions for England, Scotland and Wales mentioned above.

The efficiency of the SBL in the provision of relevant apparatus in schools was highlighted by Keltie in his 1885 report: 'under some of the School Boards, such as those of London, Birmingham, Edinburgh, and Glasgow, great progress has been made, to a considerable extent on the basis of what is known in Germany as "Heimatkunde" [sic]'.[64] Whilst other English and Scottish school boards also demonstrated an awareness of home studies through fieldwork (illustrated above), the SBL was the only board in Scotland or England to express this progress through a school atlas. In Keltie's view, the SBL met expectations of what geography education should look like in terms of the proposed focus on the 'home region'. He believed that 'a visit to the store of the SBL would in itself be an education to teachers of higher schools who desired information as to the geographical appliances within reach of those desirous of improving the geographical position'. [65]

The map content of the *London school board atlas* reflected this 'improved' state of geography. It represented the 'home' geography of London school children by the inclusion of two special supplementary maps at the front of the atlas showing

[63] *Philips' London school board atlas* (1900), i.
[64] Keltie (1885), 40.
[65] Keltie (1885), 13 and 21.

the county of London and the Thames Basin. These two maps illustrate the influence the SBL's episteme and pedagogy had on the production of the atlas since they echoed Keltie's 1885 report of the teaching of geography in London board schools: 'in each of the London Board Schools … there are a special map of the neighbourhood of each school, a map of the division in which the school is situated, and a map of London and its environs' (Fig. 5.3–5.4).[66]

This atlas also facilitated the fieldtrips conducted by teachers for school children in London, aiding the combined practices of observing and map reading evident in the accounts of local fieldtrips (above). As E.J. Orford, teacher at Michael Faraday School, South London, pointed out: 'it will be found that if a map of London is easily available for any boy who may want to find his way to a distant part, it will be continually in demand, and if there is a map of London in the atlases used it is the first to become grubby—chiefly from surreptitious use during private study'.[67]

When education became the responsibility of the LCC in 1902, after the abolition of English school boards and their replacement by Local Councils, George Philip & Son re-published the *London school board atlas* under the title of the *London county council school atlas* (1908). This was a replica of the *London school board atlas* with the statement on the title page claiming it was 'specially prepared for the *LCC* Schools'.[68] It contained the same 'special supplementary maps' of the London area, maintaining the emphasis on London pupils' home region.

[66] Keltie (1885), 13.
[67] Orford (1906), 264.
[68] *London county council school atlas* (1908), i.

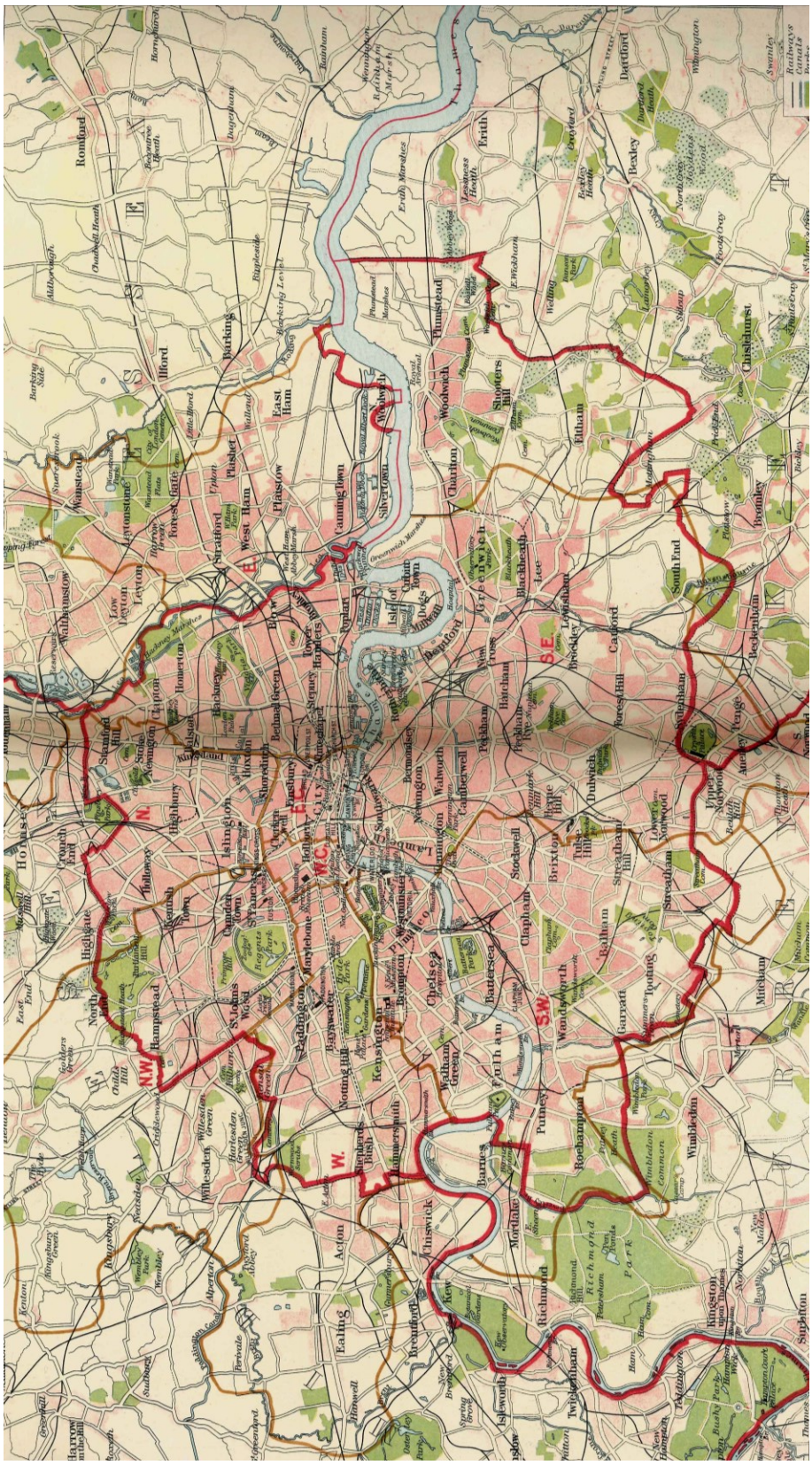

Figure 5.3. The County of London (Source: *London school board atlas*, 1900, iii). Reproduced by permission of the Trustees of the NLS.

Figure 5.4. The Thames Basin (Source: *London school board atlas*, 1900, plate D). Reproduced by permission of the Trustees of the NLS.

Through the *London school board atlas* and the *London county council school atlas*, the SBL and LCC regulated geographical knowledge for London schools. Their regulating, and authoring, activities applied not only to the style and content of Philip's atlases but also to many other publishers' works through their 'Requisition List', which determined the texts to be used in London board schools. The regionally specific content of Philip's *London school board atlas* meant that it was included in the SBL's Requisition List in 1900, described as 'specially prepared for the School Board for London'.[69] In this way, the list was an 'authorial strategy' by the SBL to ensure the production of relevant knowledge.

Not all publishers followed the example of George Philip & Son in adapting a school atlas specifically for the SBL. Some publishers and mapmakers questioned the SBL's expertise in matters of mapmaking and publishing and raised concern about the monetary risk of localising knowledge in a single text to such an extent.

[69] London Metropolitan Archives (LMA), School Board for London (SBL), 188, Minutes of the Meeting of the Special Sub committee of the Evening Continuation Schools, 22 March 1900.

This was expressed in a Memorandum from the SBL's Books and Apparatus Sub-Committee in 1899, which reviewed the procedure by which publishers had works assigned to SBL's Requisition List. William C. Bridgeman (chairman of the Sub-Committee) revealed that publishers provided 'specimens of their school publications or small apparatus to the Board', which then decided whether these were appropriate for London schools.[70] A statement by an anonymous 'publisher' in Bridgeman's memorandum suggested that the List might be abolished altogether since, in the opinion of the writer, the decision to reject a piece of work is often arbitrary and based on 'some fanciful objection'. The unnamed publisher, probably speaking from experience, agreed, however, that if the list was maintained, a review process was necessary in which there was an opportunity for the publisher to receive feedback so that 'any slight defect might be pointed out and rectified before finally printing'.

There was thus a tension between producing a locally specific text—a criterion set forth by the SBL—and producing a text to secure a wider readership and profit, which was an important agenda among publishers and mapmakers (as we have seen in chapter 3). Despite this, however, publishers recognised the benefit of directing teachers to teach from such a local perspective: a representative of Thomas Nelson and Sons, 'Mr. Brown', admitted that although his firm 'adapted their books to the needs of the whole market and not to London alone', he believed, like Allen, that the List had a positive influence on the quality of apparatus used in London board schools.[71]

The involvement of particular educational and/or geographical bodies in the production of an atlas did not always narrow an atlas' audience, and publishers had strategies to widen their readership: the involvement of the GA in this same *London school board atlas*, evident in the preface which referred readers to 'the approval of the Geographical Association, by one of whose members the maps have been revised', was a result of George Philip's suggestion to the GA in 1899 that its 'co-operation . . . in the matter of the selection of names and other points affecting the

[70] LMA, SBL, 188, 'Memorandum on the Method of Procedure of the books and Apparatus Sub-committee', By William C. Bridgeman, 21 April, 1899.
[71] LMA, SBL, 188, Minutes of the Meeting of the Special Committee on the Selection of School Books, Friday 14 July, 1899.

general treatment of maps' would make the atlas suitable not only for elementary schools but would prove its suitability for secondary schools.[72]

Philip's tactic in gaining the GA's support was to widen the atlas' readership beyond London board schools. GA member E. R. Wethey was chosen 'to look over the proofs of the maps at various stages with a view to making suggestions'.[73] The strategic nature of Wethey's role in the production of the atlas was evident in Philip's confession to GA secretary J. T. Masterman that since the SBL had the final say on the atlas,

> You will understand that we could not bind ourselves to adopt all the suggestions your representative might feel called upon to make, but in the event of our being able to adopt a substantial proportion of same, we should wish to be permitted to state that the atlas generally met with the approval of your association.[74]

Wethey was to be an advisor in the atlas and, through him, the GA was to be a guarantor of credible knowledge for a broader school audience.

Philip's plan, however, came up against Masterman's resistance, anxious about giving *a priori* support to the atlas and levelling with Philips that 'not till the maps are finished will it be possible to say what measure of approval the Geographical Association can give them, or in what form it is to be expressed'.[75] Whilst to Philip, the GA's involvement was a sign of credibility and a promise of atlas sales, for Masterman—for whom the atlas was not a commercial venture—the GA's involvement depended on the ability of the printed atlas to teach geography according to the Association's guidelines: 'we [the GA members] are glad to take any opportunity of assisting in work that may as we hope, prove of real value in improving the teaching of geography in schools'.[76] Unsurprisingly, Wethey's individual involvement went unacknowledged in the printed *London school board atlas* and details of his role in its production are largely unknown.

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[72] *Philips' London school board atlas* (1900), iii; SCRO, GA, 1988/60, Item 8, Incoming Correspondence, 1893–1912, George Philip to Masterman, 17 March 1899.
[73] SCRO, GA, 1988/60, Item 8, Incoming Correspondence, 1893–1912, George Philip to Masterman, 17 March 1899.
[74] SCRO, GA, 1988/60, Item 8, Incoming Correspondence, 1893–1912, George Philip to Masterman, 17 March 1899.
[75] SCRO, GA, 1988/60, Item 8 correspondence, 1893–86, Masterman to G. Philip & Son, 28 August 1899.
[76] SCRO, GA, 1988/60, Item 8 correspondence, 1893–86, Masterman to G. Philip & Son, 28 August 1899.

Some light may be shed on Wethey's part in the atlas by his previous involvement in the 1897 GA committee appointed to draw up a 'list of important points to be used as criteria of the quality of geographical textbooks, class books, and atlases'.[77] It is impossible to determine Wethey's influence on the committee's conclusions, but we can examine the correlation between the GA's suggested content and style in school atlases and the actual *London school board atlas* produced three years later, ostensibly, under the Association's directions.

The atlas did reflect the committee's insistence on physical features, revealing in its preface that 'physical features are given special prominence on the general maps'.[78] Historical and political geography were also covered by the maps, an important feature according to the GA's report. Also favoured in the report was the interaction between political, historical and physical geography: the preface to the *London school board atlas* noted that 'in every case where separate political and physical maps are given, they are so arranged as to face each other . . . a special chart is given illustrating the historical growth of the British Empire . . . and to facilitate comparison . . . as far as possible [are] drawn on a uniform scale.[79] In the case of all of the maps in any atlas, the GA committee concluded that 'a standard of comparison should be given with relation to some unit of area and also with relation to the continent or world'.[80] The suggestion to meet this criterion was to print, opposite each map, a black and white outline map of the continent or hemisphere to which it belonged. No outline maps were included in the *London school board atlas* but comparison between maps was enabled since 'the scale of the maps of the British Isles (Plates 6 and 7) has been chosen as the unit, and as many maps as possible have been drawn on this scale'.[81]

It is misleading to say that the number of similarities between the *London school board atlas* and the GA's guidelines were intentional but they suggest that some of the GA's views were influential in the production of the atlas. Overall,

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[77] The committee also consisted of Masterman; RGS members John S. Keltie and Hugh R. Mill; and members of the Teacher's Guild: H. Courthope Bowen, H. Busk and J. R Langler (SCRO, GA, 1988/60, Item 8 correspondence, 1893–86, Leaflet on the 'General advice with regard to the teaching of geography and choice of books and atlases', *Teachers' Guild* No. 5, July 1897).
[78] *Philip's London school board atlas* (1900), i.
[79] *Philip's London school board atlas* (1900), i.
[80] SCRO, GA, 1988/60, Item 8 correspondence, 1893–86, Leaflet on the 'General advice with regard to the teaching of geography and choice of books and atlases', *Teachers' Guild* No. 5, July 1897.
[81] *Philip's London school board atlas* (1900), i.

however, it is justifiable to conclude that the GA's role, through Wethey's advisory status, was evidently less authorial (than the SBL's in the same atlas) and more advisory. Philip was concerned in the *London school board atlas* with meeting the SBL's insistence on 'home' geography and the role of the GA was ancillary to this concern with relevance—a ploy by Philip to extend the audience beyond London and the elementary stage, and thus improve atlas sales.

The GA and the London school atlas

More pragmatic was the GA's influence in the production of the *London school atlas* (1900), another atlas for London schools but not specifically for those under the direction of the SBL. Two months prior to the GA's collaboration with Philip and the SBL over the *London school board atlas*, the Association was approached by Hugh O. Arnold-Forster, the textbook writer and politician. Arnold-Forster's proposal was that the GA should edit the maps for the atlas already in progress, a task similar to that given to Wethey. The GA council members responded by appointing Douglas Freshfield, president of the GA, and Bentham B. Dickinson, co-founder and honorary secretary, as advisors.[82] Before their task began, others on the GA council suggested certain features which Freshfield and Dickinson should ensure were included in the atlas.

For Herbertson, it was essential that particular scale relations and projections were adopted, as well as the most 'generally accepted colour scheme'.[83] Hugh Robert Mill added that they (Freshfield and Dickinson) must insist on the best workmanship and not give undue prominence to the British Empire, adding that they should omit astronomy and explain 'the principles on which physical features are represented'. At the same time, Freshfield suggested the judicious and non-mechanical selection of names for insertion in maps and the adjacent positioning of physical and political maps. Ten months later, Freshfield and Dickinson reported to the council that 'a number of their suggestions had been adopted'. As we have already seen in chapter 4, authorship was a collaborative process, 'enmeshed in a whole set of relations'.[84]

[82] SCRO, GA, 1988/60, Item 98, Committee Minute Book 1893–1912, 12 January 1899.
[83] SCRO, GA, 1988/60, Item 98, Committee Minute Book 1893–1912, 19 December 1900.
[84] Mayhew (2007a), 27.

For British audiences

The published *London school atlas* provides further insight into the nature of the GA's part in its production, drawing our attention once again to the importance of materiality and content in textual analysis. The atlas was published first by the London School Atlas Company in 1900 and, from 1911, by Arnold-Forster's cousin Edward Arnold, head of the London firm of Edward Arnold Ltd. From the perspective of Arnold-Forster, the GA's involvement in the *London school atlas*, as Philip expressed it in the production of the *London school board atlas,* was by and large inscription in the printed text, highlighting the association's approval of the atlas and so guaranteeing trustworthy content. In the preface to the published atlas, the GA was credited as giving 'valuable assistance' and being 'a body formed to promote the study of geography, and particularly competent to form a just view as to the actual requirements of teachers'.[85] The preface also mentioned Freshfield and Dickinson, presented as members of the GA who 'examined the scheme, and revised and corrected the list of names in the various maps'. Herbertson, on the other hand, was presented as writer of the introduction, his role as advisor to Freshfield and Dickinson obscured in print. Neither was Mill's influence on their editorial role acknowledged, his name appearing no where in the atlas.

Atlas content, however, professed to the influence Herbertson, Freshfield and Mill had on the atlas. Plates 1–5 of the *London school atlas* presented images, diagrams and maps to explain what Mill insisted on: the principles upon which physical features were represented. Plate 1, for example, illustrated the mapping of a landscape and the meaning and use of contour lines in maps, while plate 2 provided images to explain scale in maps, answering in part Herbertson's request for certain scale and projection relations—projection being explained by Herbertson in the introduction to the atlas (Fig.5.5). Herbertson also advocated consistent colour schemes, pointing out in the introduction that in the atlas' physical maps the seas deeper than 600 feet were coloured in light blue and the shallow seas of the continental shelf in dark blue, and in political maps the hill shading was shown in grey and colours were used to distinguish the different boundaries. Adjacent physical

[85] *London school atlas* (1900), 2.

and political maps were also given in the atlas to Europe, France, India and Africa, a request made by Freshfield ten months before.[86]

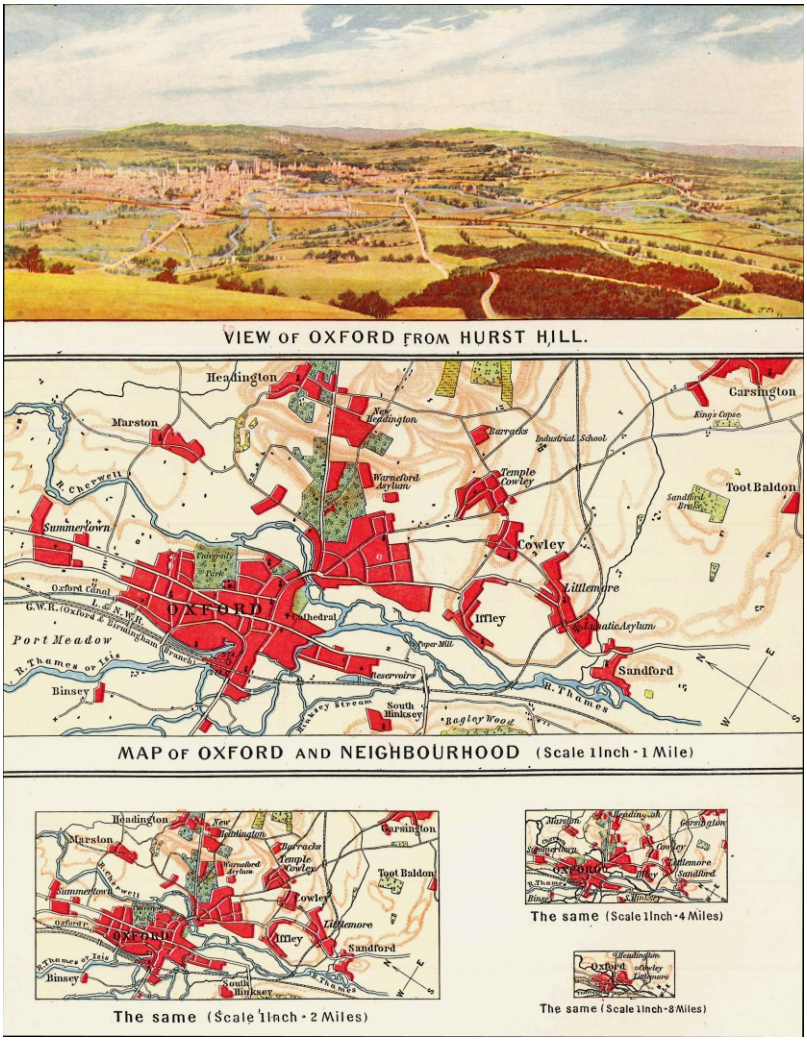

Figure 5.5. The meaning and use of scale in maps (Source: *London school atlas*, 1900, plate 2). Reproduced by permission of the Trustees of the NLS.

Whilst Freshfield and Dickinson's function was similar to Wethey's in the *London school board atlas*, their personal acknowledgment in the *London school atlas*, I suggest, is significant and reflects what seems to have been a greater ability to shape style and content than Wethey had experienced with Philip and the SBL. This influence on the *London school atlas*, however, was directed by those geographers shaping Freshfield and Dickinson's opinions prior to production and

[86] *London school atlas* (1900), plates 1 and 2, vii-viii, plates 12 and 13, 20 and 21, 34 and 35, 36 and 37.

whose editorial function was largely unacknowledged in the atlas. Like in the *London school board atlas*, the GA was largely seen by Arnold-Foster as an institution with a national reputation in the promotion of geographical education. Thus the involvement of the GA's individual representatives, who were performing *authoritative* activities in the *London school atlas*, was of less importance than Arnold-Foster's commercial agenda to make a profit, echoing what Pedley has found in British and French mapmaking, which were dominated by mapmakers' business concerns over sale and profit.[87]

Suggestions for an RGS atlas

For Scottish firm W & A. K. Johnston, it was the RGS that could help guarantee a successful school atlas. In contrast to what we have considered in relation to GA's association with publishers in atlas production, the decision on what role the RGS would have in Johnston's atlas was not in the publisher-mapmaker's control. The outcome of Johnston's appeal to the Society in 1899 to appoint a committee to edit one or two school atlases funded and published by Johnston and issued 'under the direction' or 'with the approval of' the RGS was disappointing. The RGS responded to the Johnston firm with the notification that it had established a Special School Atlas Committee 'to ascertain what is being done in the trade with regard to school atlases' and according to committee member Francis Galton, school atlases were already in preparation by publishers Longmans, Philip, and Macmillan, and this fact eliminated the need for an atlas specifically by the RGS: 'the Committee . . . are of the opinion that it is unadvisable that the council should take upon itself the proposed responsibility or that it should associate itself with any single school atlas'.[88]

It is important to note here that Galton's rejection of Johnston's scheme contrasts with the RGS' support in 1894 of John George Bartholomew's new *Physical atlas* (1899).[89] It was the atlas' 'high character' and 'the scientific standing of the names associated with the work' that convinced RGS council members that 'it

[87] Pedley (2005).
[88] RGS, Committee Minutes 1883–1890, Report of the 'Special School Atlas Committee' by Francis Galton, 8 February 1889.
[89] *Bartholomew's physical atlas* (1899, London: Archibald Constable & Co.).

will be useful in promoting the study of geography in the UK'.[90] The *Physical atlas* was aimed at a general readership and was to be edited by Herbertson and the meteorologist Alexander Buchan, published by Archibald Constable and Co., produced by Bartholomew, and, subsequently, 'published under the patronage of the RGS'—a feature noted in Mill's review of the atlas in 1899.[91] The RGS's tradition of supporting physical geography prevailed in the decision to pledge its support to Bartholomew's atlas—which was both physical and for general readership.

It is also significant that it was John Scott Keltie who personally informed Bartholomew of the Society's decision to support his *Physical atlas*: Keltie, it should be remembered, in his 1885 report to the RGS on school education, had advocated an informal agreement between the RGS council and educational publishers in order to 'encourage the production of text-books and atlases, framed in accordance with their [the RGS'] scheme, by offering to affix their [the RGS'] imprimatur on any which seemed to satisfy their requirements'.[92] Despite the RGS's endorsement of Keltie's findings at the time of his writing, their subsequent activities in atlas production failed to follow Keltie's instructions.

A second attempt to incite RGS support for school atlases came from fellow RGS Council member Colonel George Earl Church in 1905. In contrast to Galton's earlier suggestion that school atlases required limited attention from the RGS, Church suggested to RGS president George Taubman Goldie that the production of an 'RGS school atlas' would increase the society's 'general usefulness and prestige' and 'give us a net return of at least £500 per year'.[93] Church's scheme was more than a revenue producer; he believed it would also meet the Society's 'laudable desire to spread a love of geography throughout the British Empire', and he was probably also responding to the upset among some geographers that the RGS was falling short of its educational duties: 'so far as my observation goes, we only meet with the usual success of those who try to make the kettle boil by putting the fuel on top instead of underneath it. Why not . . . pay more attention to the spread of the love of geography among the lower school than among the universities?'. A 'powerful'

[90] RGS, Committee Minutes 1890–1897, Report of the Scientific Purposes and Education Committee, 26 January 1894.
[91] Mill (1899), 650.
[92] Keltie (1885), 78.
[93] RGS, Committee Minutes 1897–1903, Church to George Taubman Goldie, 19 December 1905.

publisher or mapmaker, so Church believed, was a sure way to produce a trusted atlas; the stamp of the RGS, on the other hand, would help ensure that people respect and buy it for its geographical content.

Church's proposed project never came to fruition, largely due to the interference of fellow RGS member Major Leonard Darwin. Darwin wrote to Goldie opposing the scheme on the basis of the RGS's expected role as impartial advisor on such matters as maps and atlases, evidently ignorant of the RGS's attachment to Bartholomew's *Physical atlas* seven years earlier: 'could we trust the editor of our journal to state that an atlas published elsewhere was superior to our own? Or should we even wish to state this? . . . Our reputation for impartiality would be damaged, even if our advice was in reality impartial, which would be doubtful'.[94] A further reason for Darwin's disapproval was the necessity of competition in the school atlas market. If the RGS' name was taken as the highest authority on the matter of geographical knowledge (which Darwin assumed it would be), the resultant lack of competition from other publisher-mapmakers would limit the variety of atlases and so cause progressive reduction in their quality. Darwin even suggested that the Society would have driven 'Bartholomew out of the field to the detriment of true geographical progress . . . I would far rather be without an income thus obtained'—advice that seems to have been followed by Goldie since no 'RGS atlas' for schools was ever published.

As I have shown, attempts by publisher-mapmakers and/or particular local educational authorities to provide local geographical knowledge for a regional approach in geographical education were shaped by the activities of geographical institutions who acted as they did because of the responsibility they felt (or didn't feel) over educational matters. For atlas producers, the in-text references to the GA and the RGS in school atlases were principally attempts to secure sales and profit through a guarantee, by association, of credible knowledge and content. GA members saw the *London school board atlas* and the *London school atlas* as opportunities to fulfil their role to support geographical education. The RGS, I reveal, maintained a distant role when it came to school geography and school atlases—a view challenged by those within and outside the society.

[94] RGS, Committee Minutes 1903–1906, Special Committee on Colonel Church's Proposal for an RGS Atlas, Darwin to Goldie, 2 February 1906.

Conclusion

It is noteworthy that in his 1917 progress report on geography Keltie, referring to improvements in school atlases, related the success of school atlas publishing to the activities of the RGS, although also highlighting the joint role publishers and geographers had played in the advance of geography's status over the last thirty years.[95] The view from Keltie and others was that the problems geography faced in the late nineteenth century were now largely overcome. The reality, according to the GA's continuous campaigning in relation to the Advanced Courses controversy, and the requests—both realised and failed—of particular publisher-mapmakers for assistance in atlas production, was that there were still attempts to maintain and promote the geography's position as an educational and scientific discipline in England's schools, often through geography's texts. There was a tension, among geographers and different professional bodies, between the recognition of the progress geography had made to date and desires for its further recognition. This was expressed by Rodwell L. Jones in 1916, then head of the London School of Economic's geography department, who suggested that 'modern geography, as a school and university study, has arrived. There is no need to push at an open door. The guest has arrived, I say, but he is not yet feeling quite at home'.[96]

In contrast to the RGS', broadly speaking, satisfaction with geography's status in schools, in Scotland geography's position in education continued to be addressed by the RSGS. John Ian Bartholomew informed the secretary to the SED in 1929 that 'the membership of this society [the RSGS] includes many teachers of geography in all types of schools in Scotland and the council is taking steps to ascertain their opinion as to the nature of ideal courses in geography for primary schools in Scotland'.[97] In the RSGS, teachers had a voice and school geography was a central topic of concern. As I have shown in this chapter, in the teaching of geography different geographical bodies had distinct agendas which influenced their response to attempts both to develop and to challenge geography's educational position.

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[95] Keltie (1917).
[96] Jones (1926), 66.
[97] RSGS, Correspondence, File 31.59, Bartholomew to Mr Macdonald (secretary to the SED), 14 December 1929.

School atlases were not only the result of interactions between mapmakers, publishers and individual geographers (as we have covered in chapter 4) but, as I have shown here, they were also bound up in communication between publisher-mapmakers and educational and geographical bodies—the latter another actor in the production process. Sometimes greater authority over atlas production was wielded by the mapmaker-publisher, and in this case the educational and/or geographical institution became a guarantor of credible knowledge for the reader and a safeguard of atlas sales for the publisher-mapmaker. At other times, it was the institution that determined the nature of its involvement (or not) in production, paying more attention to the educational value and relevance of a particular atlas (to its own agendas) than its saleability. In each case, atlas production was shaped by the activities, opinion and reputation of the particular educational and/or geographical body, and of its individual members, in relation to geographical and educational matters; these opinions varied both between different bodies and among individual members in the same organisation. I argue here that atlas production was informed by geography's institutional history but this influence must be examined in relation to specific texts and in the light of interactions between mapmaker-publishers, particular educational and geographical bodies, and individual representatives/geographers.

My concern in this chapter has been the institutional networks through which atlases were made to move in order to be deemed relevant and credible to teach pupils across the UK about the local and, subsequently, about the farther reaches of the Empire. My focus on the production of 'local' knowledge for UK pupils illuminates the need to examine the dissemination of knowledge through school atlases to parts of the Empire beyond Britain in terms of the personal, business and institutional networks upon which this depended. It is to this that I turn next**.**

6

‘Home’ geography for the Empire beyond Britain

Introduction

The localising and particularising of school atlases for pupils in distinct parts of the UK took place in parallel with the adaptation of geographical knowledge for pupils in Britain’s overseas territories. My concern here is with how the regional approach was manifest in the style and content of school atlases for imperial audiences. This was facilitated in part by exchanges of knowledge and pedagogy between the periphery and the metropolis but, as I show here, this knowledge transfer was never linear and it was always shaped by the specifics of place and of audience.

The points I address in this chapter in relation to school atlases and school geography—namely the transmission and translation of knowledge between Britain and its colonies and dependencies—have been addressed, in part, by Dubow in his study of the meaning of ‘Britishness’ and Empire: ‘in defining the British world (particularly in the case of the dominions) we ought to distinguish between the overt projection of British power from abroad (imperialism) and the assertion of British influence by local actors whose affinities with their new countries of settlement overlapped with their sense of ‘home’ (colonialism)’.[1] This more complicated imperial relationship also characterised the production of school atlases. Geographical knowledge was not simply made *for* particular colonial locations, but neither was it simply made *in* particular colonial locations: rather, in this chapter I address the exchange and circulation of knowledge between different individuals and between distinct locations across the Empire. I consider how these communicative interactions between publishers, mapmakers, geographical institutions, geographers and other professionals were manifest in ‘situated moments of practice’ which, I argue, at times took the form of school atlases.[2] School atlases were thus implicated

[1] Dubow (2009), 6–7.
[2] Withers (2010), 235.

in the broader imperial and educational project of producing scientific (and geographical) knowledge in and for the Empire.

The situated and communicative nature of school atlas production is interpreted here through an analysis of atlases made specifically for Australasian and South African audiences, each providing a particular manifestation—through style and content—of the processes and people necessary to make geography relevant to pupils in distinct parts of the world. School atlases were also made in large numbers for Canada and India (evident in chapter 3) but these are covered in less detail in this chapter. I show here that the localising of knowledge was not only a perceived demand among producers but it was often a request direct from atlas users. School atlases thus became a reflection of place, made to adapt to the location of specific readers, and it is with the processes and people involved in this acculturation of geographical knowledge and, specifically, school atlases that this chapter is concerned. More broadly, I address the question posed by historians of geography, historians of science and book historians, namely how knowledge travels.[3]

Geography overseas

As we have already discussed (see chapter 5), school atlases were embedded in the broader workings of geography as a discipline and science, and before turning to specific atlases for pupils in Australasia and South Africa there is a need to consider how geography operated within the interconnected local, national and imperial contexts of geographical knowledge production and use.

Geography teaching in Britain's overseas territories was characterised by a notable tension between teaching geography based on Britain's imperial status and history, drawing on geography's experiences in the UK, and teaching geography based on the view that the subject should be taught regionally and from a local perspective *ab initio*. This dualism between local and imperial narratives shaped the teaching of geography by J. D. Fisher at St. Mary's College in British West Indies. In 1920, Fisher informed readers of *The Geographical Journal* that 'St. Mary's College includes pupils of the usual secondary age . . . and is organised as far as

[3] Keighren (2010); Livingstone (2005; 2008); Ophir and Shapin (1991); Said (1983).

possible on the same lines of an English modern Public School’.[4] As in Britain, pupils in St. Mary’s College were taught geography from known to unknown parts of the globe but since their ‘home region’ was very different from that of British students, Castries, the town where the school was situated, was the first topic covered. Through the comparative method, the local was positioned in relation to Britain—the dominant imperial power—and to other parts of the globe: the localising of knowledge for pupils in the town of Castries was thus paralleled with a broader imperial narrative. As Fisher pointed out, while what was taught was ‘home geography’, the international links with the US and Britain were outlined from the start. Continuous comparisons were made between the geography of the West Indies and that of Britain, trying, for example, ‘to get boys to understand that England is much colder than the West Indies in the winter’ and that ‘the British Isles have a mild winter compared with the rest of northern and central Europe’.[5]

Views about the moulding of geography’s teaching and apparatus to pupils’ colonial location went hand-in-hand with an imperial impetus to promote geographical education throughout the Empire. There was, concomitantly, a belief among some geographers that the Empire beyond Britain was characterised by similar problems as those faced by geography in the UK and an assumption that these difficulties should be dealt with using the same solutions as those practiced at home. Such was Keltie’s view in his 1897 address to the Toronto meeting of the BAAS. According to Keltie, Britain was the model which Canadian geographers should follow in addressing what he saw as the reduced state of geography in Canadian schools. Keltie revealed that as a result of progress in the discipline in British universities, facilitated, according to him, by the activities of the RGS, a ‘school of young geographers has grown up’.[6] The Section E audience were told that the subsequent activities of these ‘young geographers’ had led to improved text-books for schools now comparable ‘with the best productions of Germany’.

Keltie’s report at the BAAS followed a pattern that characterised earlier overseas meetings of the Association which meant that geographical (and scientific) work in and on the colonies was initially done more by visiting ‘experts’, namely

[4] Fisher (1920), 206.
[5] Fisher (1920), 208.
[6] Keltie (1897), 701.

British geographers like Keltie or other men of science. Increasingly, however, as the twentieth century progressed, a more ‘local’ agenda emerged in section E sessions overseas with papers delivered largely by resident geographers: concerns about school geography in colonial places were expressed not only by individuals extending their opinions from the UK, such as Keltie, but geographers working in these colonial locations aired their own anxieties.[7] In the character of the BAAS overseas meetings we see once again a dialectic between geography of local interest—and largely locally produced—and geography with a broader imperial character and purpose. In relation to school atlas production, it is evident, as I show below, that this dialectic was often more complicated than a compromise between local and imperial narrations of the world: owing to the multiple agendas and allegiances of those involved in atlas production, the conducting of geography was at once an interconnected local, national and imperial practice.

Drawing briefly on Thomas Nelson & Sons’ school atlases for Canada as an example, we see a tension between ‘local’ and imperial knowledge and more specifically between local geographical knowledge, national identity and British-centred geography. This was manifest in anxiety among Canadian educational publishers over the dominance of British texts in Canada’s schools. Nelson was one of the most active British publishers in the Canadian school text market (see chapter 3, figure 3.6, 64) but in 1879 he received notification of controversy arising out of his publishing activities in the Province of New Brunswick. Canadian bookseller J. G. A. Macmillan informed him that New Brunswick publishers and booksellers were grieved by the supremacy of British texts, which was consolidated by the fact that the Board of Education withheld their ‘consent and approval’ from Canadian publishers whilst supporting their British counterparts.[8] These complaints among Canadian textbook producers were also a corollary of the emphasis that was being placed on negotiating a more ‘local’ or Canadian perspective in the content of school texts.

Nelson’s school atlases, however, were able to maintain the support of provincial educational authorities in Canada, in part, because they responded to Canadian readers’ distinct locations: the Ontario Board of Education, for example,

[7] Withers (2010), see particularly chapter 4; Dubow (2000a).
[8] CRC, University of Edinburgh, GB 237 Coll-25, T. Nelson & sons Archive, Letter Book 28, Macmillan to Nelson, 10 December 1879.

agreed in 1911 that unless a *superior* British text already existed, all school texts should be of Canadian provenance.[9] The ‘superiority’ of Nelson’s atlases in Canada resided mainly in their map order and content, successfully responding to the desire for ‘Canadianised’ British geographical knowledge. *Nelson’s school atlas* (1930) for British pupils was thus transformed to form the *Atlas for Canadian schools* (1930) through rearrangement in map order and an increased concentration of maps of Canada. For instance, figure 6.1 shows a map of Canada and Newfoundland that appeared in both Nelson’s *School atlas* for UK readership and the *Atlas for Canadian schools*.[10] In the Canadian atlas this occupied an early portion of the atlas on plate 11, while in the UK atlas it appeared on plate 38. We may not be surprised by this simple re-ordering of the atlas—its ‘canadianisation’—but this was a strategy that allowed British produced geographical knowledge—highlighting the British-centred Empire and world—to remain, transformed as it now was into a Canadian national narrative.

Figure 6.1. Canada and Newfoundland (Source: *Nelson’s school atlas*, 1930, UK edition, plate 38; Canadian edition, plate 11). Reproduced by permission of the Trustees of the NLS.

[9] Parker (2005).
[10] *Nelson’s school atlas* (1930), UK edition, plate 38; Canadian edition (1930, Edinburgh: Thomas Nelson and Sons), plate 11.

‘Home’ geography

Nelson’s atlases were also adapted for particular provincial and local Canadian audiences, highlighting again the interaction between the local, national and imperial contexts of atlas production, movement, and use: Nelson’s *Royal atlas for Canadian schools* (1920) appealed to its Canadian readers by the inclusion of a note on the title page that it was ‘authorised for use in schools by the governments of Manitoba and British Columbia’.[11] In the 1925 edition, provincial governmental support was extended by a recommendation from ‘the Minster of Education for Ontario for use in the Secondary schools of the Province’.[12] The national atlas was made to fit into the educational agendas of specific provinces through a simple inscription. In addition, and with no alteration to map content, the atlas was also made to meet audiences’ needs at the city scale: a direct request to further localise the *Royal atlas for Canadian schools* had been made to Nelson in 1923 from the Public School Board of Winnipeg, the main education authority in Manitoba’s capital city. The only alteration requested by the Winnipeg School Board to make this atlas a viable text for its schools was an imprint of the School Board’s name in the title page.[13]

Localising school atlases for an Australasian audience

As I have shown, the same practices used in the production of atlases for local UK audiences (see chapter 5) were employed to provide relevant geographical knowledge for imperial locations, adding supplementary maps to an existing atlas or producing a bespoke atlas for an audience in a colonial location. Atlas producers were thus responding to what Darnton has termed ‘implicit readers’ (see chapter 2, 22): ‘by reading and associating with other readers and writers, they [‘authors’] form notions of genre and style and a general sense of the literary enterprise which affects their texts’.[14] This ‘tailoring’ of knowledge to readers’ interpretive communities lends to my attempt to reveal that the (changing) form and content of texts were

[11] NLS, Acc.10222, PR, 60a, folio 39, cover, contents and index for *Nelson’s royal atlas for Canadian schools*.
[12] NLS, Acc.10222, PR, 66d, folio 257, frontispiece and contents of *Nelson’s royal atlas for Canadian schools*, 18 March 1925.
[13] CRC, University of Edinburgh, GB 237 Coll-25, Letter Book 155, George Graham to S. B. Watson, Nelson’s Toronto House, 23 November 1923.
[14] Geertz (1983).

informed by the location of intended readers before the published text was disseminated.

Publishers', mapmakers', geographers' and other professionals' perceptions about the need for local knowledge were not only implicit (based on their perceptions of readers' needs) but, at times, they were also supported by direct requests from readers, mainly geography teachers, to adapt atlas style and content to their location. Such a request is evident in a letter from A. Hocking, a high school teacher in Melbourne, Australia to John George Bartholomew in 1915. Hocking lamented the lack of a suitable atlas for secondary schools in Australia and suggested that Bartholomew's *Comparative atlas* (1914), published by Meiklejohn and Co. for British schools, could be altered to align more closely with his students' specific setting: 'naturally, we in Australia emphasise Australian geography just as *local geography* is emphasised in other lands'.[15] This 'local' approach to geographical education in Australia was also encouraged by an Australian writer in 1903, who presented 'a plea for continental Geography' informed by Australia's 'new' state, which, according to them, necessitated a 'true picture of the peculiarities of the great whole of the continent'.[16]

Hocking's suggestion for more relevant geographical knowledge included the substitution of six maps in the *Comparative atlas* for six maps of Australia. Maps to be omitted from the *Comparative atlas* to make it less 'British' included two maps of the British Isles, one of Canada, one of Mexico, one of Palestine and, illustrating Hocking's national (rather than continental) emphasis, one of New Zealand. To be inserted into the atlas to make it more Australian, Hocking wanted maps of Victoria, New South Wales, southern Australia, western Australia and Tasmania. Fortunately for Hocking, Bartholomew was already negotiating the reproduction of OUP's *Physical and political school atlas* (1913) to form the *Australasian school atlas* (1915) and concerns about relevance were already being discussed: OUP publisher G. C. Faben indicated to Bartholomew that the 'great problem' in producing such an

[15] NLS, Acc.10222, Business Record 928, Incoming Correspondence, Hocking, to John George Bartholomew, 15 December 1915; Comparative atlas (1900, *London:* Meiklejohn & Son).
[16] Anonymous (1903b), 7.

atlas was including 'enough maps to make it a distinctively useful atlas in *Australia*'.[17]

One individual who had some part in this localising of the *Physical and political school atlas* for Australasian readership was Karl Reginald Cramp, historian and schools inspector (see chapter 4). Hocking's suggestions came after the Australasian school atlas had been started by Bartholomew and OUP but Cramp's insistence on the inclusion of certain maps he believed would make the *Physical and political school atlas* sufficiently 'Australian' was in line with this teacher's requests. The maps Cramp wanted included physical, political and industrial maps of New Zealand, Australia, and Tasmania; a map of Malaysia, West Indies and Central America; maps of the Antarctic and the Arctic; and—what forms the focus of my concern here—an appendix of historical maps with explanatory notes illustrating Australia's discovery and exploration.[18] Whilst Cramp included maps of New Zealand, he brought a distinctly Australian or national contribution to the atlas and shared Hocking's view that 'local geography' should be emphasised. Cramp's historical maps and explanatory text were consistent with Hocking's national emphasis and despite the atlas containing 'Australasia' in the title, the historical maps focused on the history of Australia, neglecting the history of New Zealand, British New Guinea, and other islands in Oceania, with which Britain was perceived to have weaker imperial ties.[19]

Previous studies of how knowledge is made to move from place to place have tended to focus on readers' varied reception of a text in a distinct location (and the conceptual and physical influence on texts) but, as the *Australasian school atlas* shows, in the case of school atlases the translation of knowledge began before the atlas left the map room, in the hands of both producers and readers.[20] Transformations to the *Physical and political school atlas* to form the *Australasian school atlas* were the result of negotiations between Bartholomew, OUP and Cramp, informed by the request from Hocking (reader), and together we can envision these

[17] NLS, Acc 10222, Business Record 963, Incoming Correspondence, G. C. Faben to J. G. Bartholomew, 3 February 1914.
[18] Acc NLS, Acc 10222, Business Record 963, Incoming Correspondence, G. C. Faben to J. G. Bartholomew, 16 October 1913.
[19] *Australasian school atlas* (1915), plates 47–62.
[20] For discussions on readers' transformative practices on texts and the varied reception of texts see Keighren (2010); Livingstone (2005; 2008); Mayhew (2007a); Rupke (2000); Secord (2000).

individuals as 'translators' of the *Physical and political school atlas*, relocating and reconstituting it, removing it from its purpose as an atlas for British pupils into its new found use as an atlas in Australasia. Even though this atlas was not translated from English to another language, it still went through a process of translation that led, as Rupke notes in relation to the literal translation of *Vestiges* into Dutch and German, to additional prefaces, footnote commentary, other additions such as illustrations, omissions and, most fundamentally, to the very act of cultural relocation—being eventually used by pupils in Australasian schools.[21]

These 'complex (and open-ended) histories of textual change and variance' in school atlases were a part of the production process and they are reminiscent of Borges' *El libro de arena* ('The book of sand'), a text so-called because 'neither the book nor the sand had any beginning or end'.[22] 'The book of sand' was living, responding to each reader and each read differently: each time a page was viewed it portrayed a distinct illustration or narrative; one could not view the same page twice. In the case of school atlases, their character—the content and order of their maps—was also transformed in response to distinct readers, although this transformation of style and content occurred not for every reader (at least not literally) but for distinct communities of readers in different parts of the Empire. Nor was the necessary modifying between books determined by some inherent mysticism, as in 'The book of sand', but it was, importantly, performed by producers who were anticipating and responding to demands for relevant knowledge.

Cramp's historical maps

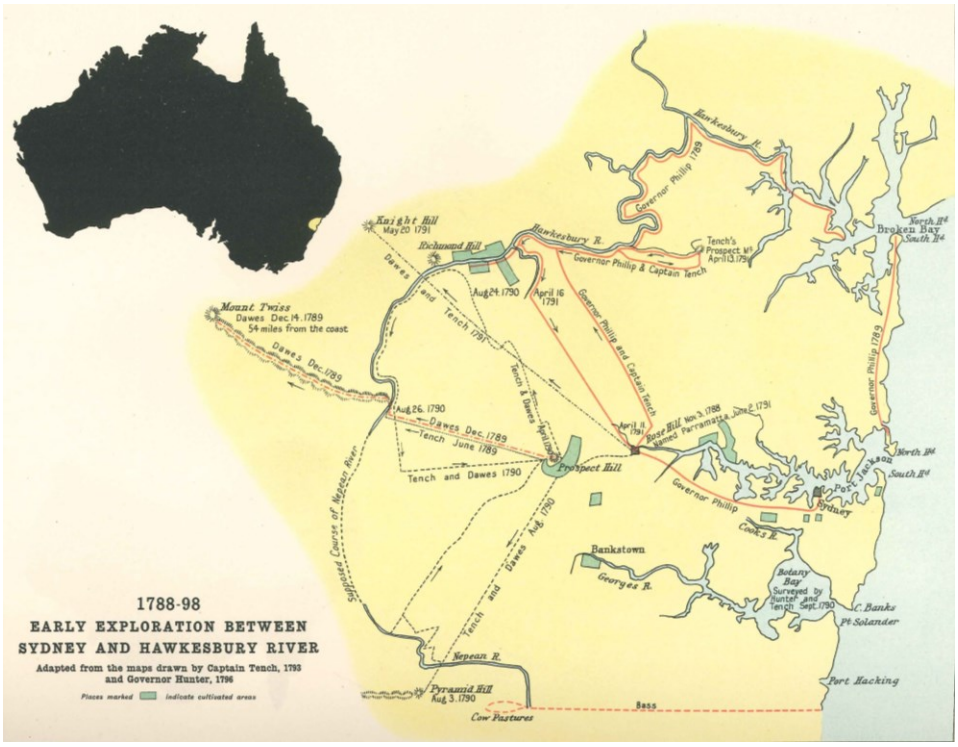
Cramp's devotion to present an Australian focus in the atlas was deeply connected to his almost unwavering allegiance to the British Crown, which was starkly apparent in the representation of Australia in the historical maps. The overriding narrative presented in the maps reveals that the localising of geographical knowledge in the *Australasian school atlas* was subject to implicit and explicit imperial narratives. Cramp's jingoism was, at the same time, informed by his local perspective, English by birth but spending most of his life in Australia: his life and work reflect Dubow's distinction between 'imperialism', as played out in the wielding of British power

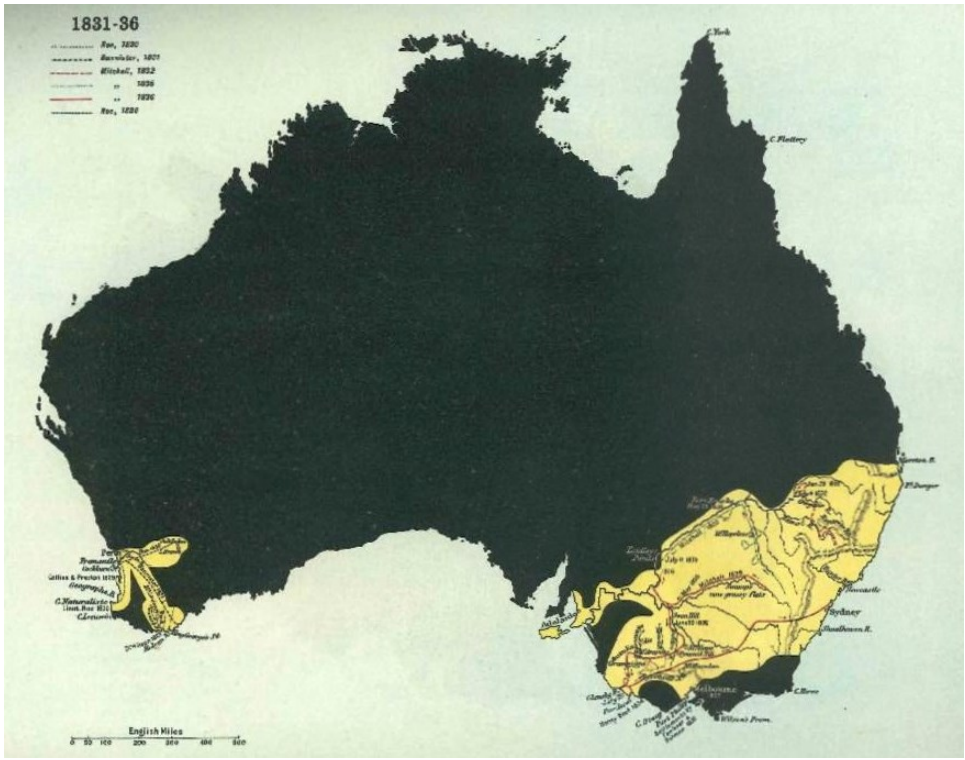
[21] Rupke (2000), 210.
[22] McGann (1991), 9; Borges (1979), 89.

from Britain, and ‘colonialism’, which was asserted by ‘local actors’ in colonial locations, such as Cramp, who constructed hybrid forms of British identities based on their specific locations.[23] The historical maps were ‘local’ at the same time as they reflected Cramp’s imperial agendas, centring the atlas on Australia and, specifically, on his interpretation of Australian history, namely the country’s relationship with Britain.

In Cramp’s historical maps in the *Australasian school atlas*, Australia was represented as an empty and black country before its discovery and population by the British. Before this point Australia was seen to be a *terra incognita* due to its existence outside British geographical knowledge, but it was also a *terra nullius* being, we are told, a land empty of any *worthy* inhabitants. As Ploszajska indicates: ‘human history, British school children were taught, had not actually *begun* in Australia until the arrival of their countrymen at its shores’.[24] After the arrival of British explorers, the colonised parts of the country were illuminated in yellow and, according to the maps, Australia’s history began. The country, we are led to believe, became progressively explored and mapped with the advance of the British and so was progressively yellow in the historical maps. By 1875, Australia was represented as fully explored and the colour black had consequently been eliminated (Fig. 6.2).[25]

[23] Dubow (2009), 6–7.
[24] *Australasian school atlas* (1915), plates 47–62; Ploszajska (1999), 123.
[25] *Australasian school atlas* (1915), plates 47–62.


1788-98
EARLY EXPLORATION BETWEEN
SYDNEY AND HAWKESBURY RIVER
Adapted from the maps drawn by Captain Tench, 1793
and Governor Hunter, 1796
Places marked indicate cultivated areas
Hawkesbury R.
Governor Phillip 1789
Knight Hill
May 20 1791
Richmond Hill
Hawkesbury R.
Tench's Prospect Mt
April 13 1791
Governor Phillip & Captain Tench
Broken Bay
North Pt
South Pt
Dawes and Tench 1791
Aug 24 1790
April 16 1791
Governor Phillip and Captain Tench
Governor Phillip 1789
Mount Twiss
Dawes Dec 14 1789
54 miles from the coast
Dawes Dec 1789
Tench & Dawes 1790
Aug 26 1790
Dawes Dec 1789
Tench June 1789
Rose Hill Nov 3 1788
Named Parramatta
June 2 1791
April 11 1791
Prospect Hill
Tench and Dawes 1790
Supposed Course of Nepean River
Port Jackson
North Pt
South Pt
Governor Phillip
Sydney
Cooks R.
Bankstown
Georges R.
Botany Bay
Surveyed by Hunter and Tench Sept 1790
C. Banks
Pt Solander
Tench and Dawes Aug 1790
Nepean R.
Pyramid Hill
Aug 3 1790
Cow Pastures
Bass
Port Hacking


1831-36
English Miles

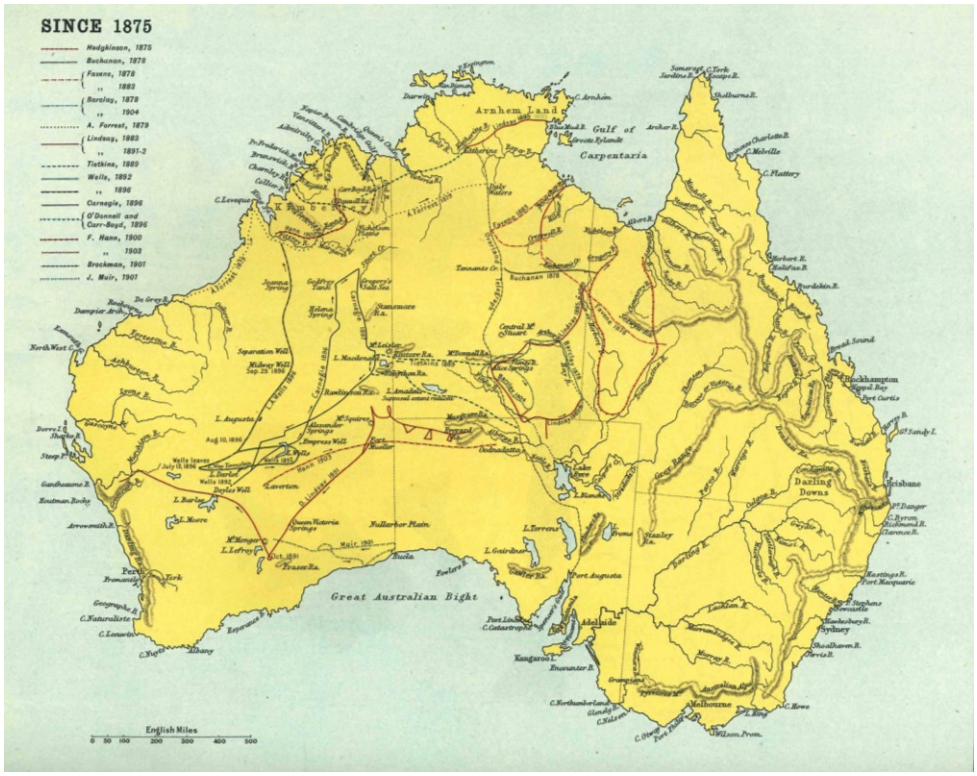


Figure 6.2. **Historical maps in the *Australasian school atlas***. A prominent feature in the maps is the progressive advance of yellow (i.e. ‘Britishness’) across the landscape (Source: *Australasian School Atlas*, 1915, plates 51, 55, 72). Reproduced by permission of the Trustees of the

These historical maps constructed an Anglocentric account of Australia’s history, and they reinforce Ploszajska’s findings in school textbook representations of Australia and Australians as the antithesis of Britain and the British.[26] The very style and format of the historical maps were reflective of explicit moral and racial discourses about the superiority of the British (light coloured) and the inferiority of indigenous Australians (dark in colour). In this case, all signs really did have meaning: Cramp’s message was inseparable from the nature of its medium and these maps are a demonstration of what has been called anthropocentric cartography, representing theories on race and morality in cartographic form, supplemented by and intertwined with Cramp’s explanations in the written introductory text (see also chapter 4 for another instance of anthropocentric cartography). [27]

[26] Ploszajska (1999), see especially chapter 4.
[27] McKenzie (1986); McGann (1991); Winlow (2001).

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The knowledge excluded from the maps was also purposeful. In all of the maps, for instance, there was little or no indication of life before British occupation; indigenous populations were not represented and Australia was confirmed as a *terra nullius*. The maps are an illustration of what Harley termed ‘intentional silences’: they constructed a selective history of Australia that mimicked the neglect of aboriginals in many school textbooks.[28] The single reference to indigenous peoples was in the written introduction to the maps, where Cramp referred to ‘the hostility of the blacks’ hindering British explorers’ advances, reflecting the widely accepted discourse of Australian aborigines as ‘backward’ and ‘uncivilised’, an image again disseminated in many school textbooks at the time.[29] For Cramp, exploration dissipated the hostility and aggression which he believed previously characterised the country; his description of the inland explorations of Australia marked Australia out as a site of British enlightenment (evident also in the ‘lightening’ of the maps as ‘Britishness’ spread).

Cramp’s maps were in line with other colonial mapping projects, including Britain’s mapping of India which was interpreted by the British involved as a social enlightenment project, accumulating knowledge about India for imperial purposes and at the same time rationalising and controlling Indian residents for civic purposes.[30] As Cramp put it when describing British advances in Australia, with the progress of British explorers ‘the curtain of darkness was being slowly rolled back’.[31] The historical maps were not only narratives reflecting the British account of Australia’s history promulgated in many British maps and textbooks, but they were also, as Edney puts it in relation to the British mapping of India, imperial tools which gave credence to the British Empire’s continuance and advance.[32]

As I have indicated in chapter 4, these historical maps also reflected negotiations between Cramp, Bartholomew and OUP publishers over the nature of geographical knowledge to be presented. The dominant narrative that survived,

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[28] Harley (1988); Maddrell (1996, 380) has indicated the absence of indigenous people in images of the colonies in school textbooks promoting juvenile emigration , and Ploszajska (1999, 121) has shown that in many British textbooks Australasian and other aborigines were seen as a minority and so unworthy of mention.
[29] *Australasian school atlas* (1915), ix; see also Ploszajska (1999), chapter 4.
[30] Edney (2007).
[31] *Australasian school atlas* (1915), vii.
[32] Edney (2007).

evident in the material format and knowledge content of the published atlas for Australasian school children, was Cramp's view of Britain's part in Australia's history; Cramp used particular authorial strategies to get his message included in the maps and he, in the end, possessed the most authoritative voice. This was also the case in his historical text-books for the same audience in which he again expressed his explicit imperial and moral perspective on Australia's history. In *Great Australian explorers* (1926) and *A story of the Australian people* (1927), he thus advocated his view of Australia as bonded to Britain by a 'crimson thread of kinship ... sealed by the blood of [her] bravest men'.[33]

Other atlas narratives on Australia's history and geography

Although less dominant, alternative interpretations of British-Australian interactions from Cramp's narrative existed. Through the school atlases studied below I reveal that variations on Cramp's imperial history of Australia were simultaneous with several interconnected influences including: changes to the workings of imperialism after WWI; the location of intended atlas users in Australasia or Britain; and British emigration, civilising and moralising agendas.

George Philip & Son's *Australian school atlas*, published in 1925, provided a less Eurocentric view of Australia's affinity to Britain. Instead of inset maps showing parts of the UK on maps of Britain's dependencies—a dominant practice in other school atlases including the *Australasian school atlas*, as well as in school textbooks—inset maps of parts of Australia were used in maps of Europe: there was an inset of Victoria and Tasmania on the map of Europe, still suggesting a link between Australia and the West but placing less emphasis on Britain and facilitating a more Australian-oriented perspective on imperial relations.[34] In addition, inset maps of Australian states and other islands in Oceania—the latter largely neglected in the *Australasian school atlas*—were included in maps of Asia, Africa, North America and South America; in most other school atlases these colonial locations

[33] Quoted in Teale (1981), 135.

[34] *Australian school atlas* (1925, London: George Philip and Son), plate 11; In her study of school maps, Ploszajska (1999) highlights the specialist cartographic techniques used to ensure that the 'natural' pre-eminence of Britain was clear: textbook maps of overseas territories such as Australia, India and Canada often included a map of England and Wales (overlain or inset) and instructed students to reflect on the extraordinary disparity between geography, size, politics, commerce and culture.

were represented in light of their connections with the UK.[35] This less Anglocentric view of the world was in line with a move in the teaching of geography after World War I towards a combined British imperial-global narrative on imperial locations.[36]

More international in extent, the imperial discourse was negotiated differently in different school atlases for Australia/Australasia. *Philips' junior relief atlas for use in Australian schools* (1926) placed emphasis on Australia's continued imperial and, to a large extent, commercial connections with the British Isles (Fig. 6.3). This national issue of strategic resources marked an increased encouragement in school texts for pupils to 'look at their place in the *Commonwealth* of British nations rather than as ruler of overseas possessions'.[37] A relief map of Australia in the same atlas, however, undermined, in part, this more international perspective since it elucidated Britain's discovery and ownership of the country, professed in the very toponymy in the map (Fig. 6.4): the names in the map were those of rivers, bays, mountains and other natural features named by, and often in honour of, the British and European explorers who discovered them.[38] Eyre's Peninsula in Southern Australia was shown, named after the English explorer Edward John Eyre (1815–1901) who had explored the region in 1839–1841.[39] Such cartographic representations of Australia's landscape were symbolic of the claim Britons believed they had and continued to have over the country and its resources; whether in relation to the Empire alone or to broader international connections, Australia was still considered to be a *terra nullius*, which both justified past exploitation and facilitated Britain's future activities in the country.

[35] *Australian School Atlas* (1925), plates 11, 13, 12, 15, and 16.
[36] The rise of more international narratives was evident in school text-books and pedagogy generally, as Madrell (1996) and Ploszajska (1999) have shown.
[37] Maddrell (1996), 364.
[38] *Philips' junior relief atlas for use in Australian schools* (1926), plate 4.
[39] Heuman (2004).

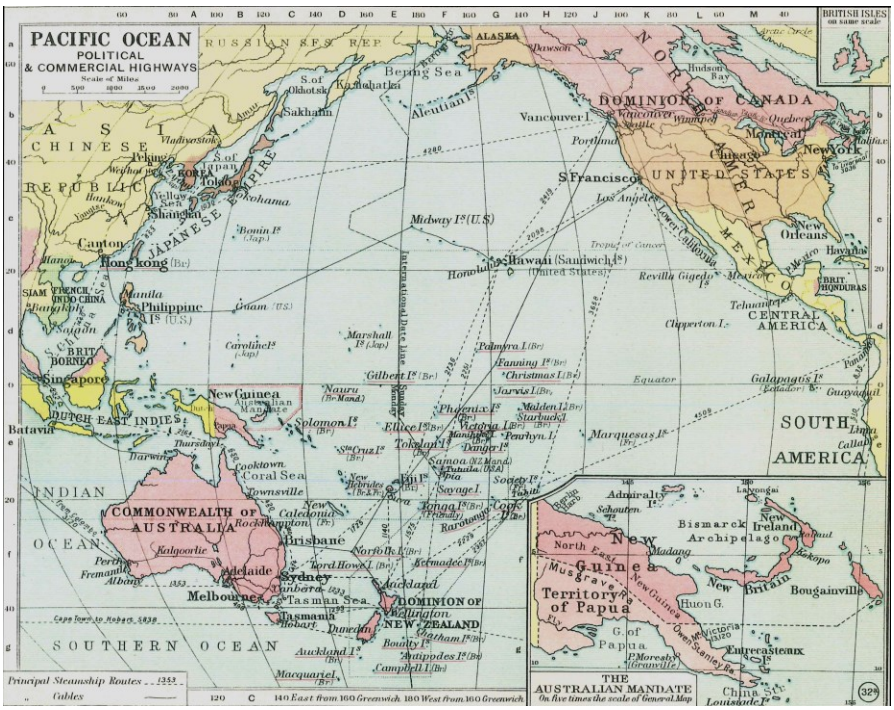

Figure 6.3. Australasia’s political and commercial highways. The inset of the British Isles reminds pupils of the UK—not represented in the main map—and its part in Australasia’s commercial activities (Source: *Philips’ junior atlas for use in Australian schools*, 1926, plate 32). Reproduced by permission of the BL.

Figure 6.4. Relief map of Australia (Source: *Philips’ junior atlas for use in Australian schools*, 1926, plate 4). Reproduced by permission of the British Library.

This focus on the close association between Britain and Australia was not confined only to atlases for Australia or Australasia. In atlases for British schools the emphasis was less on Britain's colonial intervention in Australia—as framed in the historical maps in the *Australasian school atlas*—and more on Australia as a land of opportunity for British citizens. This was propounded by the geographical pedagogy of *Heimatkunde* or the idea of teaching geography from known to unknown places. As was also apparent in school textbooks in the late nineteenth and early twentieth centuries, knowledge of one's own land as taught via atlases was necessary before understanding the world at large (as evident in chapter 5).[40] This comparative approach to geography facilitated emigration narratives, highlighting the benefits for Britons of living in other parts of the empire. In British geography lessons Australasia, namely Australia, was 'unknown', a land that required illuminating in order to benefit both Britain (in solving its problem of overpopulation) and Australia (by making use of its hitherto unexploited rich resources).[41]

Expressions of this emigration agenda were only subtly present in school atlases but this distinct narrative was manifest in their material format and content. At first glance, *Philips' British Empire atlas* (School Edition, 1924) for UK pupils appeared to offer the same imperial story of Britain's dominance in Australia's past as that presented to Australasian pupils: its opening plate showed a historical map of Australia with dates of early discoveries; dates of founding or organisation of settlements; dates when self-government was granted; boundaries of the commonwealth states; routes of navigators and explorers between 1813 and 1892; and an inset map of England and Wales on the same scale.[42]

The difference in focus in relation to Australia's historical link with Britain, and which makes *Philips' British Empire atlas* a distinctly British text, was evident in plate three. Here the 'commonwealth of Australia' was shown with symbols indicating natural resources, including gold; copper; iron; silver; tin; lead; zinc; and coal, with an inset of England and Wales on the same scale.[43] This plate also

[40] Maddrell (1996).
[41] This was also propounded in school texts, see Ploszajska (1991), 124.
[42] *Philips' British Empire atla*s, school edition (1924, London: George Philip and Son), plate 1.
[43] *Philips' British Empire atlas*, school edition (1924), plate 3.

contained inset trade diagrams showing the total imports from the UK to Australia to date, totalling £101,000,000, and exports from Australia to the UK, which reached a total of £127,000,000. The stylistic features of this atlas and the ordering of maps were in concordance with the audience to which it appealed. New Zealand's import and exports from and to the UK were also presented later in the atlas, inset on a map showing the location of natural resources across New Zealand, making New Zealand and Australia an attractive land for educated British citizens seeking to become 'men of commerce'.[44] The training for, largely, imperial citizens began with the knowledge of commerce at home, often through self-observation during local fieldwork (see chapter 5), which was then applicable to the Empire and the world. The emigration discourse was driven by the idea, expressed by Mackinder in 1911, that a 'comprehensive outlook is of the first importance for the citizens of an empire'.[45]

There was also a moral and civilising agenda behind narratives about the habitability of colonial places and behind the order and content of school atlases. In 1885, John George Bartholomew, who produced the *Australasian school atlas* (1915) (studied above) with OUP and Cramp, saw Australia among the countries suitable for 'our working classes', promoting what he called 'emigration geography' in schools. Bartholomew believed that the 'voluntary emigration' of Britain's working classes could be achieved only if knowledge about the colonies was taught in schools, making known 'the advantages and disadvantages to be realised by living in India, Australia, Canada, Cape Colony, or any other part of our British dominions'; in his mind, the 'colonies were . . . a panacea for Britain's problems'.[46] A geography teacher similarly told the readers of *The Geographical Teacher* in 1885 that pupils in elementary schools in Britain should be taught about the British Empire, 'taken regionally and with special emphasis on emigration, as it may affect the *child's future*' [my emphasis].[47]

This emigration policy and its moralising and civilising rhetoric, however, was geographically selective, evident not only with regard to the higher proportion of

[44] *Philips' British Empire atlas*, school edition (1924), plates 3 and 21b.
[45] Mackinder (1911), 81.
[46] Bartholomew (1885b), 530; Maddrell (1996), 373.
[47] Anonymous (1919), 73.

British emigration to temperate colonies than the more ‘alien’ and diseased climate of the tropics, but it also explains, in part, the emphasis in school atlases on Australia and, although less so, on New Zealand, rather than on other Oceanic islands.[48] Australia, owing to its earlier and stronger links to Britain, and to the view that the dangers of its climate had been conquered, was presented as significantly more ‘civilised’ than other islands in the Pacific. This relates, in part, to the moral discourse of climate outlined in chapter 4, which was a narrative also evident in school texts’ account of Australasia’s habitability, some textbook writers seeing New Zealand, owing to its only slightly warmer climate to Britain, as the ‘healthiest part of the Empire’, and describing Australia’s ‘dry’ condition as favourable to the health of the Britons who reside there.[49] In contrast, as evident in *Philips’ shilling dominion atlas* (1913), other Oceanic islands were described less generously: a black and white photograph presented a small group of ‘Murray Island natives’ with the note, ‘few Australians of the present generation can observe life unaltered by contact with civilisation; but in the tropical islands of the north, various native tribes still live in their primitive state’ (Fig. 6.5).[50] Murray Island (known as Mer), situated North East, off the coast of Cape York Peninsula, North Australia, was significantly more remote from the mainland—both geographically and morally detached from British-encountered Australia—and so was deemed less habitable for Britons.

[48] Maddrell (1996, 374) reveals that in the twentieth century, colonial settlers went primarily to the temperate colonies: 5 million to Canada, 2.7 million to Australia and New Zealand, 1 million to South Africa. This geography of emigration can also be related to opinions about the varied habitability of Australasia for Britons.
[49] Livingstone (1991); Ploszajska (1999), 109.
[50] *Philips’ shilling dominion atlas* (1913, London: George Philip and Son), 40.

Figure 6.5. 'Murray Island natives' (Source: *Philips' shilling dominion atlas*, 1913, 40). Reproduced by permission of the trustees of the NLS.

As for the mainland, the sentiment favoured in school texts (including atlases) was epitomised by Mackinder in his textbook *Our Own Islands* (1907), in which he encouraged Britons to immigrate to Australia since there 'they will remain subjects of our King Edward VII; the same flag will be there and they will not be among foreigners'.[51] Representations of Australasia's commercial present, its climate, and the state of its civilisation in school atlases for British pupils suggest that, like in school texts, 'the suitability of particular territories for white settlement was often explicitly discussed and based primarily on the climate, economic geography and evaluation of indigenous peoples'.[52]

Negotiating the imperial, 'local' and global narratives to be presented in school atlases for or on Australasia thus depended on the views of individual atlas producers situated across the Empire, the location of audiences in Britain or in

[51] Mackinder (1907), 298. See Maddrell (1996) and Ploszjaska (1999), particularly chapter 4 for how this emigration discourse was applied in school textbooks.
[52] Maddrell (1996), 379.

Australasia, and on broader discourses and pedagogies in the workings and representation of the Empire and its people.

Exchanging local and imperial geographical knowledge: the *Atlas for South African schools* (1899)

The tailoring of school atlases for particular imperial audiences or what I have shown above to be the negotiating of imperial, national and local narratives of Empire through changes to style and content, was not invariably enough to ensure atlas sales, nor was atlas production simply a matter of changing the content and format of atlases *for* a distinct audience. Just as the production of atlases for British pupils was intertwined with the activities of national and local educational bodies and geographical institutions (see chapter 5), so too, in order to facilitate the transfer and transformation of knowledge between Britain and colonial locations, atlas production relied, in part, on producers' networks of communication with authorities and individuals in these places.

In South Africa, Bartholomew and Nelson dominated the school atlas market with their *Atlas for South African schools*, published in 1899 (for its estimated print run see chapter 7, Fig. 7.2, 232). The success of this atlas was owed much to the role of Thomas S. Muir, at this time Superintendent-General of Education for Cape Colony. Muir was a Scottish educationalist, originally a mathematics teacher at Glasgow High School. He had been appointed in 1892 by English Prime Minister of Cape Colony, Cecil Rhodes, to manage education in this imperial location. In Scotland, Muir took great interest in geography, active in the RSGS and the RGS on matters of geographical education before, during and after his appointment in Cape Colony (see chapter 5).[53]

Muir's concern with the teaching of geography was not only applicable to Scotland but this national, and imperial agenda in the UK assisted his involvement in education in South Africa and, specifically, in the production of the *Atlas for South African schools*, the latter, according to its preface, a suggestion by Muir: the 'completed work' received his 'approval' and 'in the execution all care has been taken to insure the accuracy and clearness that he (Muir) expected'.[54] In South Africa, Muir's role was a mediator of Britain's imperial activities, in charge of education in this colonial location and, like Cramp, he was implicated in the imperial project to promote geography overseas. Muir's

[53] Muir (1911).
[54] *Atlas For South African Schools* (1899), i.

part in promoting geography in South Africa was also apparent in the 'Advanced' version of the *Atlas for South African schools,* advocated by Muir in 1903 and which contained a statement of acknowledgement similar to that in the original edition: 'the general scheme of the Atlas has been approved by Dr Muir after full consideration of the requirements of South African schools'.[55]

Muir's role in the production of these atlases, however, was less pragmatic than their title pages suggested, and correspondence between Muir and Bartholomew professes to Muir's much less authoritative, and authorial, position in the production of these atlases than Cramp's in the *Australasian school atlas* (1915). Muir's contribution to the South African atlases was, in part, strategically important for Nelson and Bartholomew since it enabled their acceptance by the South African Government, to be used as texts in Cape Colony's schools. During the production of the *Advanced atlas*, Muir had expressed to Bartholomew the 'desirability of having indicated on one of the maps of South Africa the ocean-bottom contours, and on that map, or some other, the country [South Africa] coloured according to the river basins'. To this effect, Muir referred 'the geographers' producing the atlas to the 'reports of the [South African] government trawler as embodied in the annual reports of the government biologist'.[56] The printed atlas presented no such illustration of South Africa, augmenting the evidence that Muir's part in production was largely advisory.

Muir's desire to incorporate local South African geographical knowledge in the *Advanced atlas*, however, reveals that he was, at least in theory, fulfilling his role as a guarantor of the atlas's South African character. Although his requests for certain content were ignored, Muir did act as a communication link between atlas producers in Britain and those with knowledge of South Africa, and who were working in the country. What is significant for us here is that the character of the *Atlas for South African* schools was slightly altered in the advanced edition: in the *Advanced atlas* 28 plates out of 80 represented South Africa whilst in the original edition just 10 plates out of 40 showed South Africa.[57] Another feature in the *Advanced atlas*, and one that highlights the main corollary of Muir's part in this process of 'Africanisation', was the inclusion of local

[55] *Advanced Atlas for South African Schools* (1903), i.
[56] NLS, Acc.10222, Business Record 923, Incoming Correspondence, Pro-secretary of Nelson & Sons to John George Bartholomew, 26 August 1903.
[57] *Advanced atlas for South African schools* (1903), plates 14–41; *Atlas for South African schools* (1903), 6–15.

South African Knowledge in these additional South African maps. His desire to ‘Africanise’ the *Advanced atlas* was realised in other maps and through other contributors, to which we now turn.

Localising knowledge in and for South Africa

As well as Muir’s assurance of relevance, the preface to the *Advanced atlas for South African schools* indicated that ‘many new features of interest have been included, and for some of these in South Africa we are indebted to the assistance of various specialists’.[58] These ‘specialists’ had close links to South African geographical knowledge, which they were accumulating and processing as part of Britain’s imperial activities in the country. Readers of the *Advanced atlas* were therefore told that the geological map of South Africa (plate 19) was engraved from a drawing by ‘A. W. Rogers of the Cape Colony Geological Survey’.[59] Arthur William Rogers was a British geologist, appointed commissioner to the Geological Survey of Cape Colony in 1896—serving the British Crown in this colonial location.

The rainfall maps of South Africa (plates 23-25) were also produced from data gathered locally: ‘specially compiled from the latest averages calculated by Mr Buchan’.[60] Unlike Rogers, Alexander Buchan was an ‘armchair’ meteorologist when it came to South African rainfall, spending much of his life in Scotland as secretary to the Scottish Meteorological Society.[61] An article in *Nature* in 1897, however, revealed that Buchan’s maps, although not constructed through residency in South Africa, were the result of epistemological propinquity: the data used by Buchan to construct the rainfall maps were sourced from the Meteorological Commission of Cape Town, which ‘placed in the hands of Dr Alexander Buchan the rainfall statistics obtained at 278 stations in Cape Colony during the ten years 1885–1894, in order that he might analyse and discuss them’.[62] A final contribution to the atlas from producers with access to South African geographical knowledge were maps showing farm stock and density of population (plates 28-31), which

[58] *Advanced atlas for South African schools* (1903), ii.
[59] The Geological Commission was established in November 1895 and was amalgamated with the Geological Survey of the Union of South Africa in 1911 (*Advanced atlas for South African schools* (1903), ii).
[60] NLS, Acc.10222, PR, 35a, folio 64–70, title, contents page, introductory letterpress and maps for *The Advanced Atlas for South African Schools*, 1 October 1903.
[61] Marjory (2004).
[62] Anonymous (1897), 114.

readers were told had been ‘recently prepared for the Agricultural departments of Cape Colony’.[63]

The *Atlas for South African schools* and the *Advanced atlas for South African schools* thus relied on knowledge exchanged between Britain and South Africa. Both atlases benefited from and were textual manifestations of a British agenda to promote imperial unity in the conducting of science (geography). This emphasis on ‘colonial geography’ was expressed at the South African meeting of the BAAS in 1905. To the British scientists (including geographers) organising and attending this meeting it was a means of repairing unitary notions of empire and nation in the wake of the Boer Wars; of promoting the South African Association for the Advancement of Science (established in 1902); and of dispelling established myths concerning South African affairs: overseas meetings were, more broadly, an effort ‘to reassert its [the BA’s] prestige and to fulfil its historic role as a populariser of scientific method and culture’, motivated by falling attendances at annual meetings between its formation in 1831 and the early 1880s.[64]

What is important in relation the production of school atlases for South Africa is that the purpose of the 1905 BAAS meeting was to promote both local and imperial science. This dual agenda of BAAS meetings and geography generally were apparent, in part, in the *Advanced atlas* by the inclusion of maps produced from knowledge gathered by British scientists both in South Africa and at ‘home’. In both atlases this twin narrative—imperial and local—was facilitated by the involvement of Muir, owing to his imperial and educational role in Cape Colony and, concomitantly, his access to local geographical knowledge, which was being gathered and processed through British scientific projects. The *Atlas for South African school*s and the *Advanced atlas* were therefore produced as a result of, and they moved within ‘networks of imperial exchange’, in this case between publishers, mapmakers, scientists and educationalists in different sites across the empire.[65] These networks add to Latour’s ‘cycle of accumulation’, which refers to the movement of knowledge gathered by European explorers, with the assistance of indigenous

[63] NLS, Acc.10222, PR, 35a, folio 64–70, title, contents page, introductory letterpress and maps for *The Advanced Atlas for South African Schools*, 1 October 1903.
[64] Withers (2010), 109; Dubow (2000), 68.
[65] Withers (2010), 120.

inhabitants, from sites of exploration in 'unknown' places to 'centres of calculation' (commonly a laboratory) at home.[66]

The production of these South African atlases point to the fact that the conducting of geography in the colonies was more complicated than the transferring of knowledge from the metropole to the periphery, from London to distinct colonial sites and thus, as Dubow notes, we can see that 'colonial science is rather more than the story of the diffusion of western knowledge into a continental void'.[67] In school atlas production, knowledge was mutually constituted in this way between the local and the far flung parts of the empire, even before the published text was disseminated. To use Latour's analogy, rather than European explorers, those seeking geographical knowledge about 'unknown' parts were British mapmakers and publishers; and instead of hitherto never encountered natives, knowledge was provided by well-known British experts in the field. Mapmakers' and other individuals' workshops both at home and in the places of intended readers were all centres of calculation, where 'raw data', in the form of sketches, figures and printed maps, was processed into a cartographic style based largely on the locations both of producers and readers, and between which local and imperial knowledge was exchanged and altered in the production of school atlases.

The Africanising of scientific and geographical knowledge in Nelson's *Atlas for South African schools* and its *Advanced atlas* became even more apparent in the production of school atlases for South Africa in later years, influenced by developments in the nature of Empire and science in this country. This change in the character of imperial geography was evident in the South African BAAS meetings of 1929: as Dubow notes, 'the tone context and intent of the 1929 meeting was markedly different from 1905'.[68] In contrast to the British presence at the 1905 meeting, the 1929 BAAS meeting in South Africa saw an increased number of resident scientists delivering papers. In relation to school geography, at the 1929 Cape Colony BAAS meeting, F. E. Plummer, Professor of Geography at the University of Pretoria, South Africa, believed that the reasons for 'the dearth of geographical teaching in the Union of South Africa' were due to the lack of time

[66] Latour (1987), 220.
[67] Dubow (2000b), 2.
[68] Dubow (2000), 82.

given to the subject in schools, its limited representation in examinations, a lack of suitable textbooks and atlases, and limited teacher training—conclusions in line with those made by geographers about the subject in the UK.[69]

There was a mutual concern among geographers in Britain and those in parts of the Empire beyond: geography should achieve an honourable position in the universities and schools across the Empire and its proponents should be united in their efforts to raise its status. Other South African geographers listening to Plummer's memorandum thus considered that too little attention was given in South African Schools to 'human geography', a grievance for many British geographers at the time (see chapter 4). Similarly, for R. M. Jehu (head of geography at Natal University College): 'it is certainly high time that [provincial] education departments were made to realise the importance of geography, and its place in the school curriculum'—a statement that echoed the claims of British geographers over their own subject and its experience in education.[70] The point here is that whilst at the 1905 meeting observations of geography's lowly position were proclaimed by visiting British geographers, in 1929 the agenda and purpose of geography was at the hands of South African scientists: the aim of the 1929 BAAS meeting was to promote the 'Africanisation' of South African science.[71]

This increased African character of geographical knowledge was not only temporal, as evident in the distinction between the two BAAS meetings between 1905 and 1929, but, as I show below, in the production of school atlases it was also spatial, connected to the location of those producing and disseminating the geographical knowledge presented. For instance, producers' location was a factor in the production of T. Makew Miller's *National contour atlas for South Africans schools* (1913) produced in the interlude between the 1905 and 1929 BAAS meetings. The first plate of the South African publisher-bookseller's atlas consisted of a hemisphere map with Cape Town at the centre.[72] This was the virtual antithesis of hemisphere maps in other school atlases for South Africa (and elsewhere) which placed the UK at the centre, at the heart of the British Empire. Whilst the maps in

[69] Plummer (1929), 353.
[70] Jehu in Plummer (1929), 354.
[71] Withers (2010), 109.
[72] *Makew Miller's national contour atlas for South Africans schools* (1913), plates 1.

Miller's *National contour atlas* contained the inscription of English publisher-mapmaker Bacons 'Geographical Establishment', their sequence and style point to a subtle 'Africanisation' of geographical education three years after the formation of the Union of South Africa in 1910. Other maps of Africa in the atlas contained insets of the British Isles on the same scale, maintaining a connection with the British Empire. Interestingly, however, instead of the usual pink shading of insets of the British Isles in many other school atlases at the time, those on maps of Africa in Maskew Miller's atlas were coloured, variously, orange, white and yellow.[73]

Also distinct from Philip's and Nelson's South African atlases at the time, was the ordering of maps in the *National contour atlas*, revealing once again the transformative influence of Miller's South African perspective on the ordering and structuring of his atlas. The atlas provided two content lists, one showing the plates according to their 'geographical' arrangement and the other presenting their actual chronological position in the atlas. The geographical list echoed, in part, the standardised ordering of maps in other atlases for South African pupils, moving from the hemisphere map with Cape Town at the centre to four world maps, two of Eurasia, two of Asia, sixteen maps of Africa and Southern Africa, five maps of North and South America, one map of Australia, and one of the Atlantic Ocean.[74] The actual (chronological) layout of maps in the atlas, however, evident in the second list, was quite different. The main difference in this regard was the appearance of maps of Asia in between maps of Europe and the scattering of maps of South Africa throughout the atlas interrupted by maps of the world, Europe, the Americas, and Australia. The atlas prescribed to a 'regional geography' that presented a distinct view of the world, one that was South African in perspective and challenged the homogenised sequence and appearance of maps in other atlases for South African schools. There was, at the same time, an imperial thread running through its maps, highlighted in insets of the British Isles on maps of South Africa.[75] Like the (*Advanced*) *Atlas for South African schools* (1898, 1903) and the *Australasian school atlas*, Maskew Miller's atlas, although influenced by the firm's South African

[73] *Makew Miller's national contour atlas for South Africans schools* (1913), plates 4–7.
[74] *Makew Miller's national contour atlas for South Africans schools* (1913), ii.
[75] *Makew Miller's national contour atlas for South Africans schools* (1913), plates 4–7.

location, reflected a dialogue between local South African knowledge and the dominant imperial narrative.

South Africa’s imperial ties were less subtly represented in English publisher George Philip’s *Students’ atlas for South Africa* (1929), reproduced from *Philips’ new school atlas* three years before South Africa became independent from the UK and in the same year of the BAAS meeting in South Africa, which was characterised by a greater South African character than the earlier 1905 meeting. This atlas contained nine supplementary maps of South Africa, including an historical map of South Africa, as shown in figure 6.6, three maps of the different sections of Cape Province; a map of Transvaal Province; and maps of other South African individual provinces. Another supplementary plate showed six thematic maps of South Africa, two of which are shown in figure 6.7, presenting temperature and regional vegetation.[76] Like Maskew Miller’s atlas, Philip’s atlas placed emphasis on intended readers’ location. In Philip’s atlas, however, South Africa’s Dutch, Portuguese and British past were central themes in the supplementary maps of the country: the historical map of South Africa on plate one showed the progress from the country’s status as a British colony in 1854 to the Union of South African in 1910.[77]

[76] *Philips’ students’ atlas for South Africa* (1926), ii, plates A–L.
[77] *Philips’ students’ atlas for South Africa* (1926), ii.

Figure 6.6. Historical map of South Africa (Source: *Philips’ students’ atlas for South Africa,* 1926, plate ii). Reproduced by permission of the British Library.

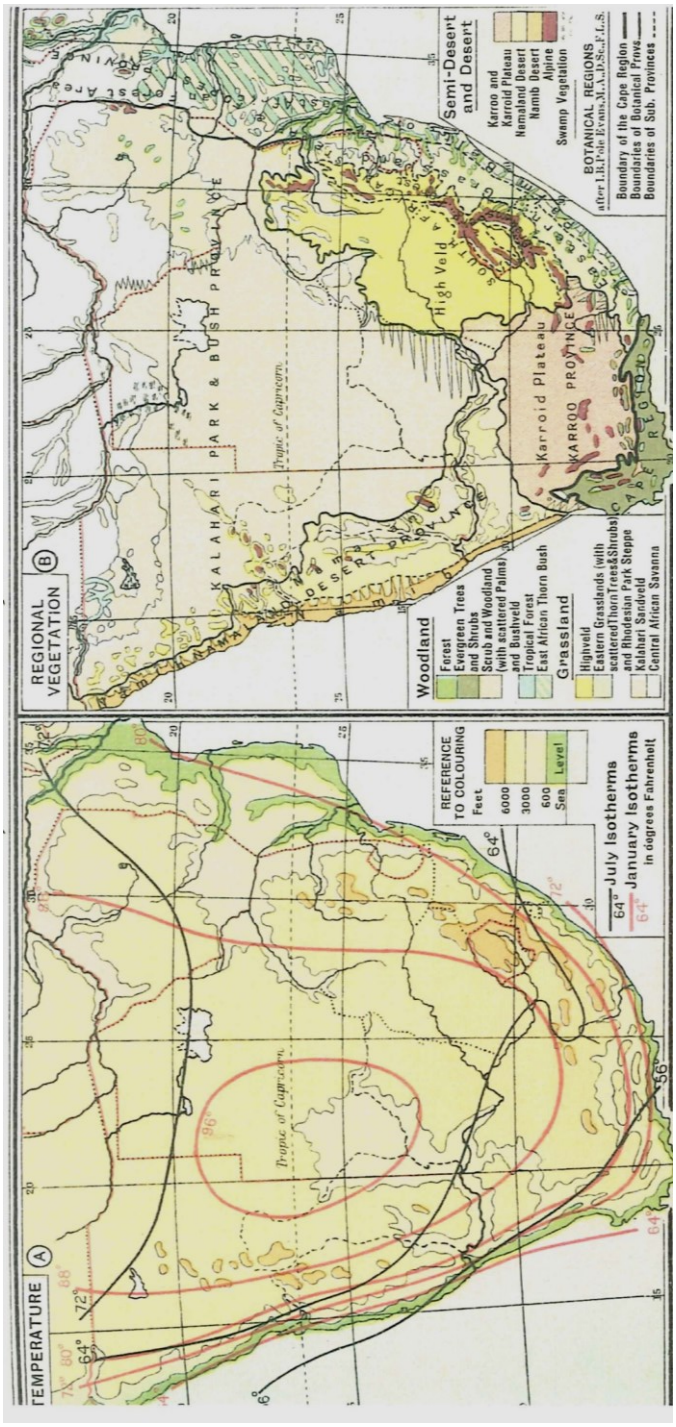

Figure 6.7. Two of six thematic maps showing temperature and vegetation (Source: *Philips’ students’ atlas for South Africa,* 1926, plate L). Reproduced by permission of the British Library.

In both Maskew Miller’s and Philip’s atlas, the negotiation between the local South African perspective and the British imperial narrative was differently manifest

in map order and content. If we recall Dubow's distinction between imperialism and colonialism, Maskew Miller's atlas presented South Africa's *colonial* geography—the atlas being framed by a South African focus—while Philip's atlas gave greater attention to *imperial* geography and history—focusing on Britain's part in this country's past and present.[78] In the production of these two atlases, the negotiating of local, national and imperial narratives were both framed to meet readers' South African locations but their differentiation in style and content is explainable in the varied location of their publishers, whose authorial intentions were evident in the published text.

Conclusion

The common feature in the production of these school atlases for imperial audiences was the connection between style and content and intended and/or actual readers' locations. This was differently manifest in different atlases, in large part owing to the distinct locations of their users, but also because of the particular negotiating, among their producers, of the local, national, imperial and global contexts of atlas production and use.

This chapter has shown that the same atlas re-arranged had different meaning. In some cases, dominant imperial discourses on race and civilisation were the main narrative propounded, shaped by a particular individual and disavowing any alternative perspective. We know that 'author' does not refer to a single person (see chapter 4) but, rather, it was a process enmeshed in a whole set of relations between publishers, mapmakers, editors and, as I have shown in part here, readers. Despite this 'polyvocality' of atlases, there was still an opportunity for one person's authorial voice to be the most clearly heard in the printed text[79]. In the case of the *Australasian school atlas* this was Cramp's.

In negotiations over style and content, some opinions were elevated above others but this points to the greater authority of one individual and the predominance of their views in decisions over style and content, rather than indicating the power of a single 'author' in the making of a text's meaning. Even when Empire remained the central theme in an atlas—as in many of the school atlases presented here—the

[78] Dubow (2000).
[79] Mayhew (2007a), 29.

nature of the narrative represented through style and content was also shaped and re-shaped according to the location of readers (varying between those texts for pupils in Australasia and those for users in Britain), in the case of school atlases for Australasia; or, in the South African school atlases presented here, according to producers' locations and, subsequently, their particular allegiance to the Empire.

The role of different individuals in atlas production reveals that the transformation of atlas style and content in atlases for pupils in distinct colonial locations was only one part of the process of knowledge translation from one place to another. Not only were material format and content subject to transformation and translation before the atlas left the map room but the production of school atlases for imperial settings was embedded in networks of communication (exchanges of knowledge between atlas producers in UK and 'experts' with access to local knowledge in distinct parts of the Empire). School atlas production thus supports Rupke's statement that 'a translation is not merely a medium of transfer, but more importantly a mental meeting point where barriers of language and culture are crossed'.[80] For school atlases to be applicable to a distinct audience their (re)production relied on the transferring of geographical knowledge between producers in Britain and 'experts' in the field—between periphery and metropole. That is, school atlases for the Empire beyond Britain relied on imperial networks of communication between mapmakers, publishers, and scientists (including geographers) in both Britain and readers' country of residence. Whilst in this case literal linguistic translation was not performed, school atlases were manifestations of the nexus between different individuals in distinct parts of the Empire who were conducting, exchanging and disseminating geographical knowledge.

The communication of knowledge between atlas producers and scientists in this way challenges Latour's dependence in the 'cycle of accumulation' on 'immutable mobiles', such as maps, since it illuminates the fact that knowledge never came into existence, moved or was received in a circular manner, as Latour and others (including Darnton) suggest.[81] In the case of the atlases covered in this chapter, in many cases knowledge was accumulated and produced by 'experts' in intended readers' countries of residence, sometimes at the request of a British

[80] Rupke (2000), 209.
[81] Latour (1987), 220, 227; Darnton (1987; see chapter 2, 22).

mapmaker-publisher; it then travelled to and from the UK several times to be read, reviewed, revised and, most importantly, transformed, into cartographic form; and was sent back to the respective place of reception as a particular genre of mapbook (school atlas) for pupils in that colonial location. It was the *limited* fixity of atlases that allowed their translation from place to place.

The atlases presented here therefore support Dubow's view that 'there are sound reasons to push further with the idea of the British world as an interconnected zone of mutual interaction'.[82] These atlases highlight the many different people, from distinct locations, involved in the production of an atlas and the exchanges of information and skill across national and international boundaries necessary to produce relevant and credible geographical knowledge for particular users.

In this chapter I have combined a study of texts with a consideration of the people and processes involved in their production: changes to atlas style and content deemed necessary by producers and readers to adapt geographical knowledge to pupils' local setting shed light on the practice of regional geography and its negotiation at the local, national, and global scale. The following chapter moves from this focus on knowledge transfer to consider the extent to which reception (reading and reviewing) directly influenced atlas production by drawing on evidence for what we might think of as the reception history of school atlases.

[82] Dubow (2009), 20.

7

Reading and reviewing in the production of school atlases

Introduction

My focus in this chapter is school atlas production in the light of questions of reception. Reception has received considerable attention in book history: some book historians see the reader, and their 'interpretive community', as the main protagonist, while others have re-emphasised the physicality of the text as an important device in the dialogue between readers and producers.[1] More recently, historians of science have illuminated the varied reception of texts, expounded by historians of geography who argue for a history and geography of reading (see chapter 2).[2] I suggest here that atlas history benefits from a consideration of these 'reception' issues.

My concern in this chapter is to provide a review not only of school atlas reception but of the meaning of 'reception', as a process understood by previous scholars. It is evident from these scholars that an analysis of atlas reception faces the challenge of the empirical basis by which to know how a thing was read and why it was so read. Darnton recognises this difficulty in his attempt to conceptualise the movement of a book from production, through its dissemination, to its consumption by readers, concluding that 'reading remains the most difficult stage to study' (see chapter 2, 22 for Darnton's model).[3] Book historians and historians of science and geography therefore face the difficulty of finding evidence of readers' reception.

Attempts to do this have been informed by the understanding that reception is distinguishable between processes of reading and reviewing.[4] Reading involves the usually silent act of engaging with a text with no specific aim of critiquing its contents. Historians of this process of reception rely on the physical traces of reading: 'for any act of reading to become part of the historical record, it needs to be

[1] Fish (1980), 14; McGann (1991); McKenzie (1986).
[2] Secord (2000); Livingstone (2005); Keighren (2010).
[3] Darnton (2002), 16.
[4] See Holub (2003); and Thompson (1993).

an act of authorship and leave written traces' since 'reading itself can only be understood when it has assumed specific material constitutions'.[5] Some historians of reception have been able to rely on the comments left behind by readers in the margins of books, studying both what they tell us about the reader and shedding light on the varied political, cultural and intellectual contexts in which a text was read.[6] Marginalia on books or manuscripts therefore present evidence of a text's influence on readers—their reaction to its content—and they also testify to readers' physical and conceptual effect on texts, leaving visible marks in the peripheries of a book. The margin can be a place of interaction between reader and text and this is also evident in readers' note taking activities, whether recording portions of a book in a separate notebook or in a designated space within the text, often combining their reading of one book with *observation* of nature or of other texts or images; in this way reading and observation become intertwined in an 'intimate interaction between reader and text'.[7]

In my analysis of school atlas reception (reading), the historical record restricts my engagement with readers' comments in marginalia or even their premeditated interpretations of texts in personal notes or diaries: school children were largely not in the habit of writing lucidly about the texts they engaged in and too much time has passed to allow me to consider pupils' matured interpretations of these texts by way of interview. Instead, I rely on the other, more accessible, aspect of reception, namely, reviewing.

Reviewing is the activity of an individual who sets out to judge the contents of a text, whether for personal or more public purposes. More often than not, reviews are easily traced because of their publication in periodicals, newspapers and journals. Through reviews of school atlases I can explore responses to specific atlases. The BL and the NLS provide a source of reviews published in educational and geographical journals collections. In addition, the Bartholomew Archive's newspaper cuttings—recorded by the firm itself—provide a useful source of atlas reviews, as do the journals of leading geographical institutions including *The Geographical Teacher* (GA), *The Geographical Journal* (RGS) *and the Scottish Geographical Magazine*

[5] Secord (2000), 379; McGann (1991), 5.
[6] See Gingerich (2004); Keighren (2010); Rupke (2000).
[7] Daston (2004), 444, 447.

(RSGS). I interpret such published atlas reviews together with the printing record (PR) of the Bartholomew Firm in order to elucidate the popularity of specific atlases and the major themes within which works were critiqued by reviewers.

Many of the reviews I have been able to identify, however, are anonymous, making it difficult to attach opinions to a particular person. It is also important to recognise that to have a review of an atlas is not a way to know what pupils made of it; these reviews were, rather, written by people with a particular agenda, constructing a particular image of the atlas for their particular audience. With this in mind, I use reviews in this chapter with some circumspection, recognising the distinct 'reviewing cultures' in which they operated and circulated, but also considering, nevertheless, that 'reviews of publications are vital references for understanding the critical reception of books and occasionally papers'.[8] What reviews of school atlases do is elucidate the broader themes shaping the judgements reviewers made, their views being based on questions of epistemology and pedagogy, shaped by opinions among the educational and geographical communities at the time. In this way, as I show in this chapter, reviews help to illuminate the debates, also discussed in chapters 4, 5 and 6, over the nature of geographical knowledge to be contained in an atlas and its representation in map form.

Published reviews and the PR are not the only sources utilised in my consideration of atlas 'reception'. Also considered is correspondence between atlas producers and between producers and readers involved in the production of the *Oxford advanced atlas* (1924) and the *Preparatory atlas* (1928).[9] Communication between producers and readers during production sheds light on the distinction between reading and reviewing since it demonstrates that, in reality, individuals moved between these practices. Atlas readers, sometimes geography teachers, read particular atlases and sent their opinions to Bartholomew or other publisher-mapmakers, often requesting the altering of an atlas to reflect preferred content and style. Atlas users were at the same time performing reading and reviewing practices.

Readers' role in production in this way is addressed, in part, by Darnton's communications circuit. Whilst his strict categories of 'author' and 'reader' are unhelpful when not deconstructed, Darnton draws attention to the influence of

[8] Livingstone (2005), 394; Maddrell (2009), 196.
[9] *Advanced atlas* (1917); *Preparatory atlas* (1928, London: Oxford University Press).

'implicit readers' on production, who are inadvertently informing the 'author' in the writing process (what I addressed in chapter 5 and 6), and the role of 'explicit reviewers', who provide direct feedback on books after their publication, potentially shaping subsequent editions of the same book or other books by the author.[10] In this chapter, I further challenge Darnton's categories by revealing that not only are acts of reading and reviewing at times difficult to separate, but neither are they solely the activities of the 'reader' in the traditional sense: as I show here, correspondence between atlas producers over the 'Atlas for American schools' indicates that publishers and mapmakers also engaged in acts of reading and reviewing, just as readers, through their feedback to producers, also carried out authorial processes and thus challenged the division between 'author' and 'reader', and production and reception.

Print runs and reviews

I turn first to the problem of reception in school atlases by analysing the Printing Record (PR) of John Bartholomew & Son's map and atlas production. This provides evidence of the reprinting of individual atlases and thus sheds light on their popularity and demand (see chapter 2, 52 for illustrations of this resource). The PR represents atlases printed at the request of publishers, who were Bartholomew's principal customers when it came to school atlases. We can tell something of readers' demand for particular atlases from the PR since it reflected publishers' anticipation or experience of high sales and the reprinting of a specific atlas to meet this. The PR alone, however, sheds less light on the reasons for high or low atlas demand.

Whilst I can not analyse readers' direct response to atlases, published reviews provide insight into the aspects informing reviewers' opinions and they elucidate the broader pedagogical and intellectual trends within which readers' were interpreting school atlases. The concerns expressed by reviewers of these atlases can be divided into four interconnected themes, which I will deal with in turn, and according to which school atlases were judged: these include epistemological questions over atlas content; the importance of layout and stylistic features; authorship; and relevance to

[10] Darnton (1982).

readers' locations. These themes were reflected, in part, in the PR, but in this section I also consider reviews of some atlases not in the PR due to gaps in the record or as a result of their production by a distinct publisher-mapmaker other than Bartholomew.

Epistemological questions over atlas content

According to the PR, Meiklejohn & Son's *Comparative atlas* (1900) for UK schools was printed fifteen times over the period 1904–1930 (Fig. 7.1). Its print run was initially relatively small in 1904 and 1905 when 15,400 and 15,650 atlases were printed, respectively. A general upward trend began in 1909, reaching a peak of 76,209 copies in 1926. We can see something of the success of the *Comparative atlas* in a note by director of Bartholomew Graham S. Robinson in 1924 to A. M. Meiklejohn of Meiklejohn & Son. According to Robinson, the *Comparative atlas* received attention from 'educational people' who viewed it in Bartholomew's exhibit at the British Empire Exhibition in Wembley, London: 'I feel confident that the prominence we (Bartholomew) are giving to this atlas at our stand will prove to our mutual advantage'.[11] Robinson was right to assume the high sale of the atlas since a few weeks later he reported to Meiklejohn that there was only one copy of the *Comparative atlas* left and more were needed (but it is unclear how many were sold in total).[12]

[11] National Library of Scotland (NLS), Business Record 795, Outgoing Correspondence, Robinson to Meiklejohn, 6 June 1924.
[12] NLS, Acc. 10222, Business Record 795, Outgoing Correspondence, Robinson to Meiklejohn, 23 June 1924.

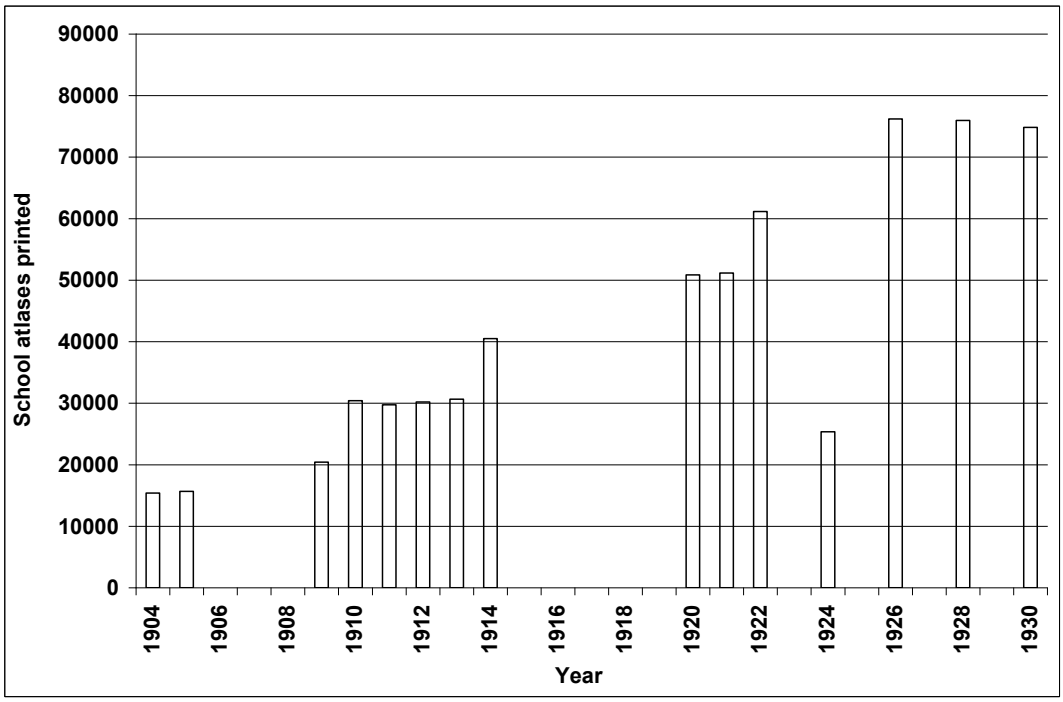

Figure 7.1. Reprints of Meiklejohn's *Comparative atlas* (Source: NLS, Acc.10222, Printing Record (PR), 1–72b, 1880–1930).

The reasons for its popularity can be attributed to positive reviews of the *Comparative atlas* (1898), which emphasised the comparative method used in the text to represent the world's geography. A reviewer in the *University Correspondent* in 1898 described the atlas as: 'truly "comparative" in at least one important point. The physical and political features are throughout shown in distinct maps, on the same scale and printed on facing pages: comparison is easy and highly instructive'.[13] The comparative method, as discussed in chapter 3, was a popular method in the teaching of geography, facilitating comparison between different cities, countries and even continents in relation to their physical, political, economic and racial features. This comparative approach was also connected to the teaching of geography regionally (evident in chapter 5) and it was continuously exercised in school textbooks.[14] The popularity of the comparative method among geographers was epitomised by Lionel W. Lyde, who was involved in the production of Bartholomew's *School economic atlas* (1910) with OUP (see chapter 4) and for whom Meiklejohn's *Comparative atlas* was within the cohort of a 'thoroughly

[13] NLS, Acc. 10222, Business Record 1882, Newspaper Cuttings, Review of the *Comparative atlas* by Anonymous, *University Correspondent*, 26 November 1898, unpaginated.
[14] Maddrell (1998); Ploszajska (1999).

educational atlas'.[15] Reviewers were therefore operating within a 'reviewing culture' that was informed by developments and trends in geography's episteme and pedagogy. The importance of cultures of 'reviewing' was also evident, as Keighren points out, in the varied reception of Semple's *Influences of geographic environment*, which was shaped by individuals' allegiance to geographical discourse, informing their judgements on her arguments.[16]

Lyde's *School economic atlas* (1910) also received attention from reviewers, similarly bound up in their views about the nature of geographical knowledge, but, as the PR suggests, its reception was no where near such a consensus as the *Comparative atlas.* The *School economic atlas* was printed three times in the period 1880–1930, ranging from 20,291 copies in 1925, 27,505 in 1926 and 40,580 atlases printed in 1929.[17] Reviews reveal that the atlas was interpreted by certain reviewers according to their propensity towards economic and/or commercial geography and their opinions of it as a method in teaching geography. We know from the production of the *School economic atlas* that Lyde insisted on the use of 'economic geography' in the atlas and believed 'commercial geography' was something distinct and unhelpful to geography pupils (see chapter 4).[18] Whilst the comparative method, forming the central narrative of the *Comparative atlas*, was largely adopted among the geographical community, discussions about 'economic' geography, namely the relations it had to climate and race, were ongoing, and reviews of the *School economic atlas* reflected such ambiguity.

The interpretation of the *School economic atlas* was subject to differentiation. A reviewer in *Practical Teachers* presented the atlas along similar lines to Lyde's narrative in the published text, promoting its 'economic' character and the importance of economic geography for pupils' everyday life: 'each ordinary map is made to pulse with modern life, and presents material for the careful study of some particular economic aspect of geography which concerns us all'.[19] Yet no matter how much Lyde tried to explicate in the atlas that 'economic geography' was distinct

[15] Lyde (1910), 95.
[16] Keighren (2010).
[17] NLS, Acc.10222, Printing Record (PR), 1–72b, 1880–1930.
[18] NLS, Acc. 10222, Proof Maps, 69, Milford to Bartholomew, 19 December 1912.
[19] NLS, Acc.10222, Business Record 1883, Newspaper Cuttings, Anonymous review of the *School economic atlas*, in the *Practical Teachers*, May 1910, unpaginated.

from 'commercial', this was subject to interpretation by individual reviewers: another reviewer described the atlas as 'one of the best atlases we have seen, especially perhaps from the *commercial* point of view'.[20] Lyde's warning in the introduction to the atlas about focusing on the 'commercial' maps as discrete representations went unnoticed, as did his emphasis on 'economic' geography.[21]

Even in an atlas designed, notable even in its title, to emphasise the economic aspect, the *School economic atlas* was differently described by different reviewers. In all of their judgements of style and content, reviewers' accounts were always connected to broader discursive principles which explained in distinct ways the interaction between physical, political, commercial and/or economic features—relationships that were perpetually conceptualised and contested among geography's professionals (evident in chapters 4 and 5).

The importance of layout and stylistic features to a text's meaning

Reviewers' interpretations of school atlases demonstrate that judgements on cognitive content were connected to evaluations of atlas style. According to some reviewers, the **format** of the book as a whole—map order, layout, binding—determined the way pupils interacted with the text and therefore informed its usefulness in imparting knowledge and understanding in the classroom. We can consider this concern with physical format in relation to acknowledgement in the history of the book that a text's content (its message) can not be analysed apart from its medium (its stylistic format).[22]

For many reviewers, a good atlas was one with consistency in the scale and projection used since this influenced pupils' ability to practice the comparative method. The lack of uniformity in maps in *Macmillan's school atlas* (1922) provoked one reviewer to note how 'the maps are the work of W. & A. K. Johnston and they vary in quality for school use. They have been selected from a variety of sources and have been reproduced from original issues on widely different scales—this may account for such *ugly fraction* as 1: 212,500,000 and this in a Mollweide

[20] NLS, Acc.10222, Business Record 1883, Newspaper Cuttings, Anonymous review of the *School economic atlas*, in*The Schoolmaster*, March 1910, unpaginated.
[21] *School economic atlas* (1910), ii, vi.
[22] McGann (1991); Mayhew (2007b).

projection'.[23] In many reviewers' mind, the more uniform the scale and projection the better the atlas.

The ability to easily compare the maps and diagrams in a given school atlas was also informed by the clarity of the information presented. A lack of overcrowding was seen as necessary to stimulate the effective engagement of students with the knowledge contained. *Philip's modern school atlas of comparative geography* was criticised for the overcrowded commercial maps that were 'difficult to read' and thus ineffective for pupils attempting to understand commercial geography: 'maps of this kind should be simple and graphic for school use'.[24] Reviewers' judgements on clarity point us to discussions among geographers in the late nineteenth and early twentieth centuries to more clearly define geography's purpose, a desire that was manifest, in part, in specific attempts to standardise the layout and style of school atlases (see chapter 3).[25] This agenda of clarity was the object of William Collins' *Clear school atlas* (1891)—recognisable in its title—described by one reviewer as 'a set of maps for school purposes at once clear, distinct, reliable, and beautiful'.[26]

Not only was the comparative features and clarity of atlases seen to be significant to their value but the way pupils could physically interact with an atlas was an important determinant of its usefulness, not least in terms of how durable an atlas was at the hands of vigorous pupils. The *Clear school atlas* was therefore reviewed and measured by one reviewer to 'stand a considerable amount of wear and tear' and the *School hand atlas* (1891)—evidently styled for this purpose—was described as being of a 'very convenient size for school use'.[27] Despite its advantageous size, however, the *School hand atlas* was, comparatively, one of Bartholomew's less popular atlases, 5240 copies and 5250 copies being printed in

[23] *Macmillan's school atlas* (1922, Edinburgh: W. & A. K. Johnston); anonymous (1926), 404.
[24] *Philips' modern school atlas of comparative geography* (1907, London: George Philip and Son); anoynmous (1912c), 295.
[25] Mackinder (1887); BAAS Archives, Oxford, Dept. BAAS, Item 330, Appointments to Committees, 1888–1916, appointing of committee to 'Enquire into the Choice and Style of Atlas, Textual, and Wall Maps for School and University Use', 1912; Philip (1917).
[26] *Clear school atlas* (1891, London: William Collins, Sons and Co.); anonymous (1892), unpaginated.
[27] *School hand atlas* (1891, Edinburgh: Thomas Nelson and Sons); Acc.10222, Business Record 1885, Newspaper Cuttings, Anonymous review of the *Clear school atlas* by anonymous, in *Perthshire Advertiser*, 16 December 1891; NLS, Acc.10222, Business Record 1881, Newspaper Cuttings, Anonymous review of the *School hand atlas*, in *Schoolmaster*, 18 May 1895, unpaginated.

1894 and 1899 respectively, which suggests that its advantageous physical format was trumped by criticisms of knowledge content.[28]

The authority of authorship

There is evidence that the usefulness of school atlases was interpreted by reviewers not only in relation to the type of knowledge contained and the style in which it was this knowledge was presented, but also with respect to the individuals and institutions involved in its production. One reviewer in the *Practical Teachers* described the *School economic atlas* (1910) as a 'new' atlas that was 'distinguished by the scholarly care and comprehensiveness of Mr Bartholomew, combined with the freshness and originality of Lyde', and for the reviewer in *Nature*, 'the child who works through the ample supply of material in the spirit outlined in Professor Lyde's introduction will be well equipped as a thinker in terms of geography'.[29] Bartholomew and Lyde's involvement was sufficient guarantee of the value of the atlas to students.

The appellation of the Bartholomew firm also acted as a guarantee for reviewers of *Macmillan's school atlas* (earliest existing copy 1891), which was judged successful even before comments were made based on its content and style. For the reviewer in the *Birmingham Daily Post*, Bartholomew's 'merits as a mapmaker' meant that the atlas 'promises to be of exceptional value'.[30] As another reviewer put it, the fact that Bartholomew was the 'compiler' was 'sufficient guarantee of the correctness of its contents and the care and labour bestowed in its production'.[31] The significance which the Bartholomew name had for reviewers is an illustration of what Foucault has termed the 'author function': the importance and function given to Bartholomew's name was based, partly, on the association with up-to-date and credible knowledge, and *Macmillan's school atlas* was thus described as 'beautifully

[28] NLS, Acc.10222, PR, 1–72b, 1880–1930.
[29] NLS, Acc.10222, Business Record 1883, Newspaper Cuttings, Anonymous review of the *School economic atlas*, in *Practical Teachers*, May 1910, unpaginated; NLS, Acc.10222, Business Record 1883, Newspaper Cuttings, Anonymous review of the *School economic atlas*, in *Nature*, 14 April 1910.
[30] NLS, Acc.10222, Business Record 1881, Newspaper Cuttings, Anonymous review of the *Physical and political school atlas*, in *Birmingham Daily Post*, December 1890, unpaginated.
[31] NLS, Acc.10222, Business Record 1881, Newspaper Cuttings, Anonymous review of the *Physical and political school atlas*, in *Observer*, Februsary 1891, unpaginated.

finished and coloured and corrected according to the discoveries in most recent explorations in Africa and elsewhere'.[32]

Reviewers' emphasis on an atlas' contributors suggests a fixation over whether an atlas could be deemed trustworthy for its readers. In the London book trade, judgements of trust were based on evaluations of producers' character.[33] In school atlases, the veracity of a text was informed by manifestations of skill and expertise, namely based on guarantees of these from prestigious institutions and/or individuals (as seen in chapters 4, 5 and 6). Reviewers of the school edition of the *Systematic atlas* (1894) were therefore quick to give credit to the individual geographers involved in this project: 'we must congratulate Messrs. Philip & Son upon the fact that it has been possible to bring together Mr Scott Keltie, Mr Mackinder, and Mr Ravenstein, for the production of an atlas. And not only must we congratulate its publishers, but also the advanced student of geography, to whom it appeals'.[34]

The benefit to Philip in seeking the assistance of Keltie, Mackinder and Ravenstein was, in part, manifest in the subsequent attention the *Systematic atlas* received among reviewers and in their largely positive reactions. One reviewer was particularly strong on this point:

> Under the powerful *agis*—threefold and cumulatively strong—of an editorial trio made up by [sic] Mr. J. Scott Keltie, the able as he the chief executive officer of the RGS; Mr. H. J. Mackinder, the popular Reader in Geography in the University of Oxford; and Mr Ernest G. Ravenstein, one of our best, and in some respects the most scholarly of our cartographers, Messrs Geo. Philip & Son have had the courage and the needful geographical enterprise to go to the great expense of publishing an atlas which is something more than new in the sense of production—which is new also in principle.[35]

In this way, in the production of school atlases, certain names became discursive devices, almost emblematic, as they performed a specific function in texts and established expectations among reviewers: as Foucault puts it, 'a name permits one to group together a certain number of texts, define them, differentiate them from and

[32] Foucault (2002), 284; NLS, Acc.10222, Business Record 1881, Newspaper Cuttings, Anonymous review of the *Physical and political school atlas*, in *School Post*, December 1890.
[33] Johns (1998).
[34] NLS, Accc.10222**,** Business Record 1885, Newspaper Cuttings, Anonymous review of *Philip's systematic atlas*, in Journal of Education, March 1894, unpaginated.
[35] NLS, Accc.10222**,** Business Record 1885, Newspaper Cuttings, Anonymous review of *Philip's systematic atlas*, in *Educational Review*, March 1894, unpaginated.

contrast them to others'.[36] This author function was dependent on certain modes of thinking about 'author' and, of course, on particular cultural interpretations of its role at different times and in different places. Within the school atlas reviewing cultures across the UK in the late nineteenth and early twentieth centuries, particular mapmaker-publishers and individual geographers or other professionals were taken to be signs of cartographic skill and/or trustworthy geographical knowledge and their presence in printed texts was a statement of the work's credibility and, by implication, the reputation of the particular publisher, the compiler, and, even, the reader.

Geographies of reading

Reviews were also, of course, the result of reading since they were themselves interpretations informed by reviewers' locations, which sometimes matched the location of an atlas' intended users. At times, atlases gained recommendation from reviewers in the intended users' country of residence but were faced with criticism when evaluated by reviewers in distinct locations—an aspect which again highlights the importance of location in understanding the production and reception of atlases (see chapter 5).

For the Australasian reviewer of the *School economic atlas* (1910, for pupils in the UK), for example, the 'many excellent features in this atlas' were not sufficient reason to give 'unqualified commendation' since, in the mind of this reviewer, the atlas placed too little emphasis on Australasia to be of any use to pupils there.[37] In contrast, the Australasian edition of the *School hand atlas* (1891) received praise because of the prominence given to Australia, which was 'a welcome feature', according to one reviewer in the *Brisbane Telegraph*.[38] The reviewer for the *Melbourne Leader* similarly focused on the emphasis placed on Australasia in the

[36] Foucault (2002), 284.
[37] NLS, Acc.10222, Business Record 1883, Newspaper Cuttings, Anonymous review of the *School economic atlas*, in the *British Australasia*, 25 August 1910, unpaginated.
[38] NLS, Acc.10222, Business Record 1881, Newspaper Cuttings, Anonymous review of the *School hand atlas*, Australasian edition, in the *Brisbane Telegraph*, November 1892, unpaginated.

atlas, seeing 'the maps of the Australian colonies' as 'full and complete, and the information … derived from the most recent and trustworthy sources'.[39]

These reviewers wrote ebulliently about the geographical emphasis in the Australasian edition of the *School hand atlas* (1891) but, in contrast, for *Australasian*'s reviewer the atlas fell short because 'no colony gets more than a page, and some are of very large extent, the names of towns, rivers, mountains . . . in some cases are given in very microscopic characters'.[40] Even when atlases professed to be made specifically for a location they were still open to criticism over disparity between the location of their intended readers and the order and geographical coverage of their maps.

Value was placed by reviewers on the inclusion of accurate local geographical knowledge. The popularity of the *Atlas for South African school*s (1899), reflected in its long print run, corresponded with the involvement of Thomas S. Muir, Superintendent General of Education in the Cape Colony, as well as other 'experts' in South Africa (dealt with in chapter 6). Thomas Nelson's *Atlas for South African schools* was one of Bartholomew's more popular school atlases (Fig 7.2). It was printed fifteen times between 1899 and 1917. In 1902, 18,650 copies were printed. Over 15,000 atlases were printed in 1903, 1905, 1907, 1909, 1912 and 1913, reprints peaking at 24,680 copies in 1914. According to the PR, the last print run was of 1,830 copies in 1917, two years after Muir's retirement from Cape Colony (see chapter 5). The importance of producers' access to local geographical knowledge is corroborated by reviews of the atlas during its success, one of which spoke of the uniqueness of the physical maps in the atlas which showed 'a general summary of recent geographical research in South Africa'.[41] Writing for his English readers, RGS map curator J. Cole's review in 1899 of the *Atlas for South African Schools* indicated that 'the preparation of this atlas [for South African schools] was undertaken at the suggestion of the Superintendent-General of Education for the Cape Colony',

[39] NLS, Acc.10222, Business Record 1881, Newspaper Cuttings, Anonymous review of the *School hand atlas*, Australasian edition , in the *Melbourne Leader*, 5 Sept 1891, unpaginated.
[40] NLS, Acc.10222, Business Record 1881, Newspaper Cuttings, Anonymous review of the *School hand atlas*, Australasian edition, in the *Australasian*, 5 September 1891, unpaginated.
[41] Anonymous (1902a), 446.

indicating to the Journal's readership that this was an atlas made primarily for South African pupils.[42]

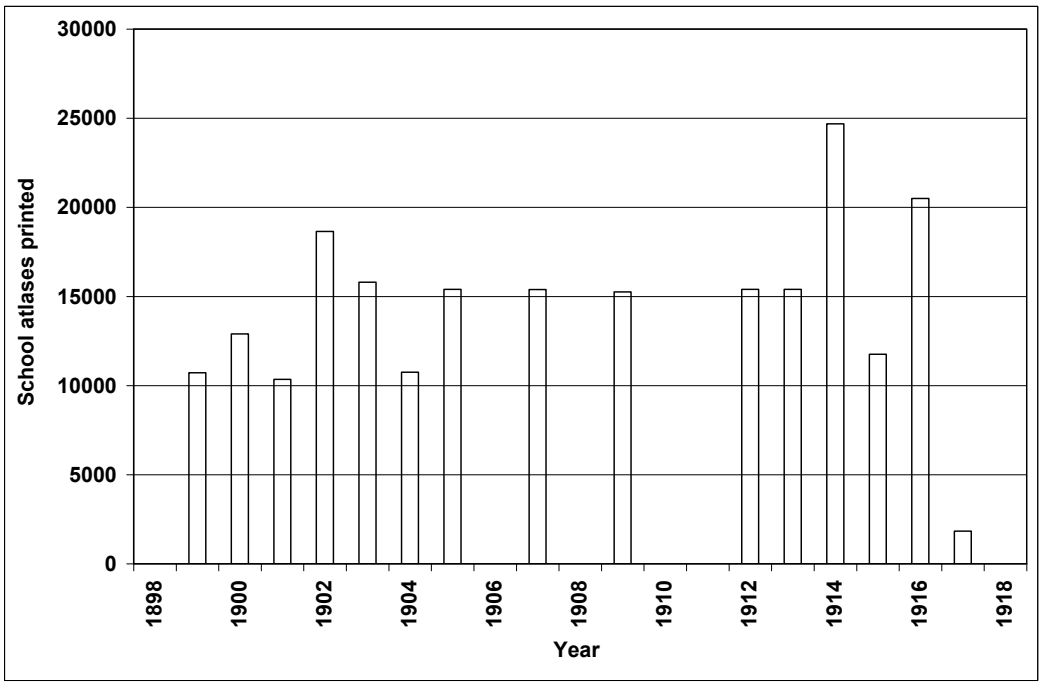

Figure 7.2. Reprints of the *Atlas for South African schools* (Source: NLS, Acc.10222, PR, 1–72b, 1880–1930).

An *Advanced* edition of the atlas was published by Nelson in 1903 and the then RGS map curator E. A. Reeves revealed to the same English readership as Cole that whilst many of the maps in the *Advanced atlas* would be familiar to those 'acquainted' with Bartholomew's atlases, this particular atlas was 'carefully made for the special purpose in view'.[43] Following Muir's retirement from Cape Colony, Bartholomew's stake in the South African school atlas market was usurped by London firm George W. Bacon, which had 'managed to secure the contract for school atlases' during the South African government representative's visit to Britain five years previously in 1920. In 1925, Bartholomew was determined to re-build previous connections between his firm and the South African government. He urged Graham to 'arrange to see this gentleman [South African representative]. It pays to keep in touch even if we are unsuccessful in getting the contract'.[44]

[42] Cole (1899), 224.
[43] Reeves, (1903), 279.
[44] NLS, Acc. 10222, Business Record 797, Outgoing Correspondence, J. Bartholomew to G. S. Robinson, 9 June 1925.

Even still, in 1928 Bartholomew and Nelson were struggling to produce an atlas that would be widely used in South African schools. While negotiating the production of a South African edition of Nelson's *School atlas* (1930), George Graham revealed the dominance of George Philip and the McDougall Educational Company in the South African market, optimistically recalling the fact that 'our [Nelsons'] old atlas has such a good name in this country [South Africa] and I am certain we would regain much of our lost atlas market'.[45] No matter how prestigious the mapmaker, the usefulness of an atlas could still be bound up in how successfully and fully it addressed the parts of the world most pertinent to its readers.

What is important to note here is that the popularity of school atlases relied, in part, on reviewers' interconnected questions about content, style, authorial credibility, and relevance, influenced by reviewers' individual and differing interpretations of what particular atlases provided (or failed to provide) for those teaching and learning school geography and what perceived demands they met in the publishing and geographical communities within which, and for which, they were made.

Readers and the (re)production of school atlases

I turn now to consider the part reviewing and reading played in atlas production. We can understand the impact published reviews had on atlas production, in part, through Darnton's communications circuit (see chapter 2, 22). In his circuit, the cycle within which production, dissemination and reception occur is brought to some form of 'completion' when it reaches the category 'reader'. As already indicated, for Darnton 'reader' can be separated into 'implicit readers', upon which the 'author' bases their decisions prior to publication, and 'explicit reviewers'—readers' judgements on style and content influencing the reproduction of subsequent editions of a text by the 'author'.[46]

In reality, the effect of published reviews on atlas production is difficult to determine. What we can say is that published reviews were not simply passive interpretations or critiques of texts but reviews formed part of reader-producer

[45] CRC, University of Edinburgh, GB 237 Coll-25, Letter Book 205, Graham to John Bartholomew & son, 4 April 1928.
[46] Darnton (1982).

interactions. In school atlas production this was at times explicit, evident when reviewers engaged in direct dialogue with producers. These instances of producer-reader interaction help not only to further explain the encounter between atlas users (reviewers) and producers but also between, as Chartier puts it, 'the world of the text' and the 'world of the reader', that is, they reveal an interaction not only between readers and producers but also between readers and texts.[47]

An explicit producer-reader dialogue is evident in a conversation between George Philip of George Philip and Son and one reviewer of *Philip's Systematic atlas* (school edition) in 1895. The *Daily Chronicle* carried a review of the atlas in which the writer concluded that they could not approve of the name 'systematic' since it was not upheld in the content of maps nor in their style of presentation.[48] The next day, the *Daily Chronicle* contained an apologetic note from George Philip, sardonically expressing Philip's regrets that the *Daily Chronicle* had 'misunderstood the object and scope of our "Systematic Atlas"' and had thus placed 'it in the hands of a reviewer who, as we trust you will permit us to show, is absolutely incapable of doing it justice from an educational and scientific standpoint'.[49]

Philip attempted to justify the errors highlighted by the reviewer and his response reveals that just as texts were subject to interpretation and, in this case, belittling from reviewers, so, too, reviews could solicit feedback from producers. In direct answer to the reviewer's comment that 'thousands of historic places have been omitted', Philip challenged them to 'find one hundred omissions which can be regarded as really material to the geographical student in higher schools and colleges for which the atlas is chiefly and primarily intended'.[50] A dialogue between 'explicit reviewer' and atlas producer was setup: the opprobrium Philip directed at the *Daily Chronicle* for allowing such a damning review of his atlas to be published was reciprocated by the newspaper's editor in the next instalment of the paper, in which he stuck to his opinion that the atlas fell short of expectations invoked by its title,

[47] Chartier (1992), 3.
[48] Acc.10222, Business Record 1885, Newspaper Cuttings, Anonymous review of the *Systematic atlas*, in the Daily Chronicle, 6 March 1894.
[49] NLS, Acc.10222, Business Record 1885, Newspaper Cuttings, response to review of the *Systematic atlas* by George Philip, in the *Daily Chronicle*, 7 March 1894.
[50] NLS, Acc.10222, Business Record 1885, Newspaper Cuttings, response to review of the *Systematic atlas* by George Philip, in the *Daily Chronicle*, 7 March 1894.

sealing the verdict with the comment that 'a large proportion of the numerous little maps at the beginning of the volume are scarcely better than toys'.[51]

Readers' interaction with atlas producers was not limited to the latter's reaction to derisive reviews. Exchanges between readers and producers also took place in personal correspondence, and it is here that we see the interaction between reader-producer, reader-text and where we return to the blurred distinction between reading and reviewing. Readers' response to published atlases in private conversation with producers does not fit within Darnton's category of 'explicit reviewer' since these lack the intention of published reviews, which were written to judge atlases according to set standards, but neither do readers' opinions about style and content and requests for change expressed in personal letters allow them to sit easily within his category 'implicit reader'.[52]

In the opinion of Captain H. Graves, for example, communicated through a letter to Bartholomew, the maps of North America in Bartholomew and OUP's *Advanced atlas* (1924) were missing the inscription of 'Yorktown', Virginia, USA: 'wishing to refer to the exact position of Yorktown I turned to my Bartholomew (*Advanced atlas*) and after a careful search arrived at the conclusion that it was not shown. As the surrender of Yorktown is about the most important event in the history of the USA I think your attention ought to be called to the matter'.[53] Graves' opinion was arrived at not by an intentional act to judge the atlas' content but, rather, his opinion was a corollary of 'silent' reading. His dissatisfaction was informed by his specific location and his desire to find local knowledge in the atlas maps. Urging Bartholomew to make the atlas more 'American', Graves placed importance on the attention map content paid to his country of residence. From Graves' point of view and with respect to one spatial reference, the atlas was incomplete. His eliciting of Bartholomew's attention to these 'errors' sets him up as both reader and reviewer of the *Advanced atlas*.

Some British readers also found the content of the *Advanced atlas* wanting. A teacher at Felsted School, Essex, H. L. Day, similarly criticised the selection of

[51] NLS, Acc.10222, Business Record 1885, Newspaper Cuttings, response to review of the *Systematic atlas* by George Philip, in the *Daily Chronicle*, 7 March 1894.
[52] Darnton (1982).
[53] Graves' suggestions were forwarded to John Bartholomew by OUP (Acc.10222, Business Record 1128, Incoming Correspondence, Humphrey S. Milford to Bartholomew, 23 July 1925).

names in the maps: 'Hapsburg (Austria) is given in the index, but not, as far as he can see, on any map'.[54] Atlas producers made atlases according to intended usage and these were not always fulfilled through readers who held their own preconceptions of what an atlas should do: the meaning of a text is therefore 'historically (and geographically) constructed and produced in the dialogue that exists between the propositions contained in the work (which are in part controlled by the author's intentions) and the readers' responses'.[55]

In this case, Bartholomew answered Day directly, highlighting that indexes were inherently selective: 'the gazetteer given with this atlas is not a complete index. It does not include some names which occur in the maps, and on the other hand shows a few names of a certain importance for which there is no room in the map of the area concerned'.[56] For Bartholomew, owing to the selective nature of production, a single school atlas could never address every readers' expectations. From Bartholomew's response, it is evident that in conversation with readers producers were not obliged to adhere to every request or to invariably alter their text accordingly: atlas style and content were not only negotiated by producers' before publication (as we have seen in chapter 4–6) but they were also open to interpretation after production as producers and readers engaged in a mutual exchange of opinions and retort.

Readers were more successful in shaping the reproduction of OUP's *Physical and political school atlas* (1924), which was transformed in 1927 to form a new edition entitled the *Preparatory atlas* (1928). The scheme for the 'new' atlas was sent to Bartholomew by OUP publisher A. P. Norrington, who revealed that, owining to 'the various reports we have had from teachers, we should like to make a certain number of changes in the new edition'.[57] According to teachers, the disadvantages of the existing *Physical and political school atlas* included:

> (1) That there are no climatic or vegetation maps; (2) no adequate map of the British railway system (essential for many examinations); (3) [lack of] larger

[54] Acc.10222, Business Record 795, Incoming Correspondence, H. J. Batty (OUP, London) to Bartholomew, 20 September 1926.
[55] Chartier (1992), 27.
[56] Acc.10222, Business Record 795, Incoming Correspondence, Bartholomew to Batty, 27 September 1926.
[57] NLS, Acc. 10222, Business Record 1128, Incoming Correspondence, Norrington to Bartholomew, 10 February, 1927.

> scale maps of England, Scotland and Wales; . . . (4) no good map of the Malay Archipelago; (5) no good map of central America; and (6) [absence of] a map of biblical Palestine . . . [and, Norrington added] we [OUP] have also found considerable apathy about most of the contents of the preliminary black and white section.[58]

For Norrington and Bartholomew, teachers' opinions were based on their experience of school geography and were thus worthy of a response from both Bartholomew and, subsequently, through alteration, from the atlas itself. A text's meaning, therefore, was created not only in the conceptual space between the text and the reader after publication, as Iser points out, but readers were capable, through association with producers before, during and after atlas (re)production, of literally transforming style and content.[59] The published *Preparatory atlas* indeed incorporated these readers' requests for change in map content, including points one to four of those given by teachers (Fig. 7.3). With respect to points five and six, a double plate of North America, where there was before a single plate, partly answered the first, but no map of Palestine was given in the *Preparatory atlas.* In answer to teachers' indifference towards the introductory maps and text, the black and white section was reduced in size from thirteen pages in the *Physical and political school atlas* to three pages in the new *Preparatory atlas*.[60]

[58] NLS, Acc. 10222, Business Record 1128, Incoming Correspondence, Norrington to Bartholomew, 10 February, 1927.
[59] Iser (2002).
[60] *Physical and political school atlas* (1922), iv–xvi.

Figure 7.3. Responding to teachers in the *Preparatory atlas* (1928). These maps were among those in the new edition which responded directly to teachers' complaints about the *Physical and political school atlas* (1924) (Source: *Preparatory atlas* (1928, plate 2; pp.ii; plate 12, respectively).

Yet readers' reviews of the *Physical and political school atlas* were not all incorporated into the new *Preparatory atlas*. The selection process by which producers deemed necessary readers' suggestions once again challenges Darton's

neat exchange between 'reviewer' and 'author'.[61] Thus one teacher's suggestion that the railways and rivers in the maps of the *Physical and political school atlas* should be 'printed [in the *Preparatory atlas*] in a more contrasting manner' was met with Norrington's admission of apathy: 'personally I (Norrington) think this is a rather silly criticism, but I see what *she* means. You (Bartholomew) may like to consider the matter, but, as I say, I doubt if there is anything in it'.[62] The *Preparatory atlas* suggests that Bartholomew followed Norrington's advice, failing to make rivers and railways more distinctive in the maps of the atlas.

A more positive outcome came following teacher C. J. Grist's complaint about the inclusion of the world on Mercator's projection in the *Physical and political school atlas*, suggesting that Mollweide's projection be used in the new atlas since the former 'gives a very wrong notion of the relative areas of the political divisions'. [63] Grist's letter was supplemented by a recommendation of his own authority as 'chairman of the South London Branch of the GA' and his admission that 'I have often been asked to recommend a 'good cheap' atlas'. There is no evidence that Grist's letter influenced Bartholomew's decision to replace the physical map of the world on Mercator's projection in the *Physical and political school atlas* with a physical chart of the world on Gall's projection in the new *Preparatory atlas*, but Grist's implicit guarantee of recommendation may have been more convincing than the personal gratitude of a female teacher. What is clear is that producers' responses to personal reviews in the *Advanced atlas* and the *Preparatory atlas* were subject to differentiation based on ideas of what were necessary and feasible alterations and, concomitantly, on the perceived authority and credibility of the individual reader/reviewer.

Reception (reading and reviewing) in the production process

In this final section, the category 'reader' is deconstructed further by considering how reading and reviewing were practices involved in the production of school atlases through the negotiations atlas producers conducted over style and content. As

[61] Darton (1982).
[62] NLS, Acc.10222, Business Record 1128, Incoming Correspondence, Norrington to Bartholomew, 3 February 1928.
[63] NLS, Acc.10222, Business Record 928, Incoming Correspondence, Collins to Bartholomew, 1 November 1916.

Reading and reviewing

I have shown, readers' reading and reviewing activities influenced (re)production, but these were not only processes carried out by readers engrossed in the published text: they were also part of producers' production practices. The exchange of notes, letters, proof maps and entire atlas drafts between individuals involved in the production of a specific atlas illustrates well the fluidity of processes of reading, reviewing, editing and authoring.

The remaking of the *Physical and political school atlas* to form the *Preparatory atlas*, for example, was influenced not only by readers' requests but also by producers' interpretation of other publishers' atlases. In a letter to Norrington in 1927, Bartholomew revealed that 'in making the suggested scheme of maps [for the *Preparatory atlas*] I have before me *all of Philip's atlases*, your letter of February 10 and those of various critical correspondents'.[64] In the transformation of the *Physical and political school atlas* to form the *Preparatory atlas*, Norrington compared the existing *Physical and political school atlas* with George Philip's *Elementary atlas of comparative geography* (1900) and *Atlas of comparative geography for secondary schools* (1920).[65] He considered, for instance, the greater number of plates in Philip's atlases (40 compared with 32 in the *Physical and political school atlas*), and contemplated the benefit of matching this in the new edition of the *Preparatory atlas*. He concluded, however, that forty was an 'uneconomic number to work with' and was reassured in his view that 'Philips' maps are vastly inferior to yours [Bartholomew's]. So let us stick to 32'.[66]

Reading and reviewing competitors' work also influenced the production of *Nelson's school atlas* (1930). In 1927, John (Ian) Bartholomew received a proposal from Thomas Nelson & Son to produce a school atlas for New Zealand and Australia. Bartholomew's subsequent 'paste-up' of the atlas was sent to Nelson's Australian representative F. Wright.[67] Based on his knowledge of existing atlases in the market Wright, for several reasons, deemed Bartholomew's atlas disappointing: it was too large in size; there was a lack of 'illustrated views'; there were too many

[64] NLS, Acc. 10222, Business Record 1128, Incoming Correspondence**,** Bartholomew to Norrington, 19 May 1927.
[65] *Atlas of comparative geography for secondary schools* (1920, London: George Philip and Son).
[66] NLS, Acc. 10222, Business Record 1128, Incoming Correspondence, Norrington to Bartholomew, 10 February, 1927.
[67] University of Edinburgh, CRC, GB 237 Coll-25, T. Nelson & sons Archive, Letter Book 201, George Graham (Director of Nelsons) to Bartholomew, 16 August 1927.

names; and it contained the word 'desert' which, in Wright's opinion, 'must not appear on any Australian atlas'.[68] Wright's review of Bartholomew's draft atlas was returned to Bartholomew accompanied by copies of Philips' and Collins' atlases, which, according to Wright, were 'the popular selling lines' in Australia and New Zealand'. Reviewing was an important part of the production of Bartholomew's atlases: as a result of Wright's criticism and based on Philips' and Collins' atlases, Bartholomew produced an 'alternative scheme', sending it to Watson for his opinion, presenting 'a slightly smaller page' and including sixty four pages of coloured maps.[69] School atlas production was thus characterised by a redactive process of exchange between different producers engaged in both reading and reviewing.

John Paul Goode's 'Atlas for American schools'

As Wright and Bartholomew have shown, reception (reading and reviewing) occurred even before the published atlas left the map room. This was the case in the production of *Goode's school atlas* (1925), initiated in 1908 by John Paul Goode, lecturer in geography at the University of Chicago. The atlas, for American students, was to be a collaborative venture between Goode, John George Bartholomew, who would produce the maps, and New York publisher-mapmaker Rand McNally, which would publish the atlas. Despite negotiations between Bartholomew and Goode between 1908 and 1912, Goode's final atlas contained no maps from Bartholomew and this association seems to have had little impact on the atlas; or so the printed text would have us believe. My interpretation of the sources illustrating Goode and Bartholomew's communication over the atlas attempts to add to the narrative of the printed text—an American atlas by an American firm and an American geographer—something of the reading and reviewing processes upon which it relied.

In 1908, Goode sent to John George Bartholomew a 'dummy' copy of what was then his proposed 'American student's atlas'.[70] This consisted of note sized cards (146mm by 96mm), describing the maps to be included on each plate. What is

[68] University of Edinburgh, CRC, GB 237 Coll-25, T. Nelson & sons Archive, Letter Book 23, Graham to Bartholomew, 22 December 1927.
[69] University of Edinburgh, CRC, GB 237 Coll-25, T. Nelson & sons Archive, Letter Book 23, Graham to Wright (Melbourne), 16 January 1928.
[70] NLS, Acc.10222, Business Record 947, Incoming Correspondence, Dummy of Goode's 'American student's atlas', Goode to Bartholomew, 9 June 1908.

significant for our purposes here is that these instructions referred Bartholomew to maps in other atlases (Fig. 7.4). According to the dummy, plate 17 in the American atlas, for example, was to be divided in two, the top half presenting a Mercator map of the Earth showing 'rainfall season', *as in 'Diercke p.16*'. Goode's proposed atlas was littered with references to works he had previously read, including 'Diercke's Schul-atlas', *Longman's new school atlas* (1902), and Bartholomew's *School economic atlas* (1910) and *Comparative atlas* (1900).[71]

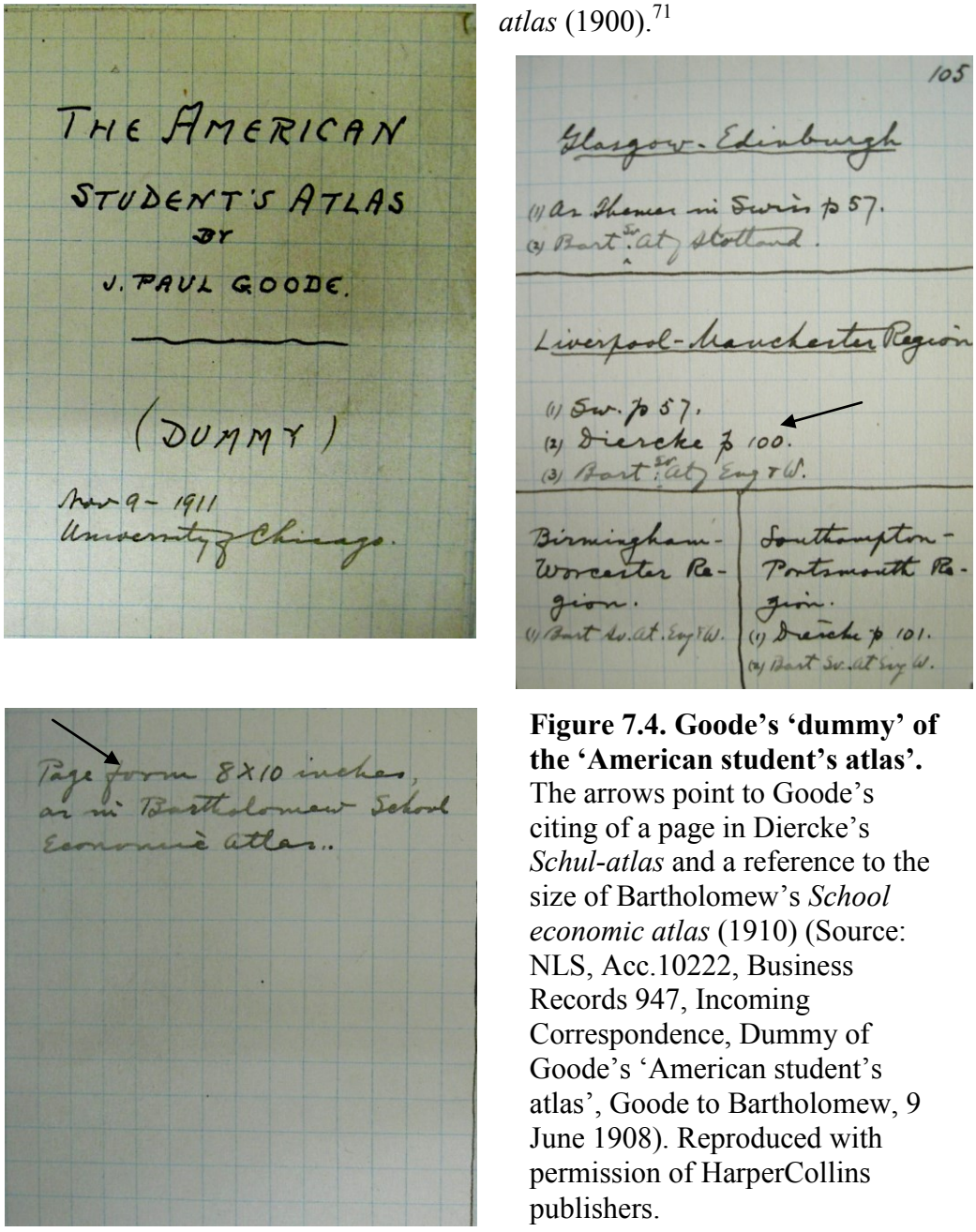

Figure 7.4. Goode's 'dummy' of the 'American student's atlas'. The arrows point to Goode's citing of a page in Diercke's *Schul-atlas* and a reference to the size of Bartholomew's *School economic atlas* (1910) (Source: NLS, Acc.10222, Business Records 947, Incoming Correspondence, Dummy of Goode's 'American student's atlas', Goode to Bartholomew, 9 June 1908). Reproduced with permission of HarperCollins publishers.

[71] NLS, Acc.10222, Business Record 947, Incoming Correspondence, Goode to Bartholomew, 9 November 1911.

In his appended correspondence with Bartholomew, Goode indicated the reasons for his dependence on these particular atlases, reviewing their style and content in relation to his intended American atlas. For Goode, 'the best atlas we have had to date is "Diercke's schul-atlas"'.[72] He thus wanted to replicate this text, to some extent, in his own atlas: 'my cherished plan for an American atlas is this: to make an atlas for use by students in colleges, normal schools, high schools, to do for America what "Diercke's school atlas" does for Germany'. In contrast, *Longman's new school atlas*, produced for American pupils by Longmans, Green and Co., along with George Goudie Chisholm and C. H. Leete, fell short of what Goode wanted, although he still made reference to its preferred aspects in the dummy atlas, suggesting to Bartholomew that plate two in the 'American student's atlas' would present the lunar eclipse along the style of diagrams found on plate two of Longman's atlas.[73] In Bartholomew's school atlases, Goode saw the appropriate size necessary for American schools: 'the size that suits me best is that of your "Comparable Atlas" [i.e. *Comparative atlas* (1900)], or better, the later "School Economic Atlas". I have designed the filling on that basis'.[74] Goode's dummy atlas thus informed Bartholomew that the atlas should be '8 x 10 inches, as in Bartholomew's *School economic atlas*'.[75]

Goode's proposed 'American student's atlas' was a hybrid atlas, dependent on Goode's reading and interpretation of other works. The influence of Goode's 'reading histories' on his dummy atlas illuminates the spaces of Goode's reading as 'sites of textual hybridity': in this way, through acts of reading and reviewing 'meaning "bleeds", as it were, from one text to another' (what we have seen in chapter 6).[76] This idea of 'textual interlacings' was a feature of the production process, evident in the way Goode planned the text around the atlases he had already

[72] NLS, Acc.10222, Business Record 947, Incoming Correspondence, Goode to Bartholomew, 9 November 1911.
[73] NLS, Acc.10222, Business Record 947, Incoming Correspondence, Dummy of Goode's 'American student's atlas', Goode to Bartholomew, 9 June 1908.
[74] NLS, Acc.10222, Business Record 947, Incoming Correspondence, Goode to Bartholomew, 9 November 1911.
[75] NLS, Acc.10222, Business Record 947, Incoming Correspondence, Dummy of Goode's 'American student's atlas, Goode to Bartholomew, 9 June 1908.
[76] Livingstone (2005), 393.

read and understood. 'Spaces' of *production*, therefore, were also sites of textual hybridity.

Goode was not alone in drawing upon his reading histories in the production of this American atlas. Whilst Goode, having chosen the atlases he wanted to emulate in his own atlas, believed that production would be a simple step-by-step process, it soon became evident, as we have already seen in chapter 4 in relation to other atlases, that this was not the case: in Goode's mind he would 'formulate the atlas, specifying maps, scales, and contents; . . . you [Bartholomew] will draw, engrave, and print the sheets, and deliver to us at your own price, on the basis of 5000 (or perhaps 10, 000) copies; [and] Rand McNally Co. will publish it as [the new title] *Goode's school atlas*'.[77] Initial negotiations between Goode and Bartholomew proved that production was likely to be more complicated. Based on his experience in school atlas production, Bartholomew saw Goode's 'dummy' copy as too 'elaborate' and costly. He responded to Goode's 'dummy' with his own 'mock-up' of the atlas, encompassing many of the Bartholomew firm's existing maps.[78] Bartholomew's desire to utilise existing maps in Goode's atlas fitted into Bartholomew's business model, which operated on the basis of the reusing of maps and atlases (see chapter 3).

Bartholomew's subsequent mock-up, he having viewed Goode's intended atlas, initiated a dialogue between him and Goode: Goode, after reading Bartholomew's draft, reciprocated with judgements on the proposed plan. On some points Goode agreed, including the use of some of Bartholomew's own maps, and he approved many of Bartholomew's suggested replacements. Of Bartholomew's plates 36–7, Goode wrote: 'I like these series of continents in the Bartholomew *School economic atlas*. It is one of the best advances made in school atlas work'. But in the same letter, Goode maintained requests for some distinct plates in the style of the venerated "Diercke's Schul-atlas", holding a more negative view of plates 14–15 in Bartholomew's mock-up: 'B's (Bartholomew's) *Comparative atlas* p. 6 is all right. The 7 degrees are acceptable. It is the style of colouring in *Diercke's* I wish to have.

[77] NLS, Acc.10222, Business Record 947, Incoming Correspondence, Goode to Bartholomew, 7 August 1908.
[78] NLS, Acc.10222, Business Record 947, Incoming Correspondence, Bartholomew to Goode, 28 November 1911.

To colour the lands only between the isotherms, makes it more legible'. Goode's review of Bartholomew's scheme continued, ranging from Goode's view that 'the geological map of N. A (North America) does not show the detail I wish … the geological maps in *Diercke's* are ideal', to his comment that the maps of Spain in Bartholomew's mock-up, taken from the *Comparative atlas*, were 'beautiful maps'.[79]

Goode and Bartholomew both participated in acts of reading and reviewing as editorial notes and plans passed between them and as they perpetually made decisions based on the cohort of school atlases they were familiar with. Withers has shown that this was also the case in the production of Blaeu's *Atlas novus*: at times ownership, readership and critical response came together.[80] In school atlas production, before the printed text left the map room, knowledge was exchanged between individuals across the world, and ideas and draft copies were disseminated, critically assessed, altered and reproduced, being greatly informed by producers' opinions of existing atlases.

The blurred outcome of these negotiations between Bartholomew and Goode, *Goode's school atlas* as it stood in 1912 when communication between the two protagonists seems to have ceased never being published, provides an opportunity to reflect on the often hidden associations behind any atlas: when Goode did publish *Goode's school atlas* (1925) thirteen years later with Rand McNally this was in many ways a completely different work. The evidence presented here, however, suggests that the style and content of *Goode's school atlas* in 1925 had some affinity to Goode's initial communication with Bartholomew—to their reading and reviewing activities and to the influence of both Goode's and Bartholomew' reading histories.

Conclusion

Goode and Bartholomew both took part at different times in authoring and reception (reading and reviewing), showing once again the limited meaning of 'author', 'reader', 'publisher', 'editor' and 'mapmaker' and challenging Darnton's strict categories.[81] Various scholars in the history of the book, the history of science and

[79] NLS, Acc.10222, Business Record 947, Incoming Correspondence, Goode to Bartholomew, 21 January 1912.
[80] Withers (2005).
[81] Darnton (1982).

the history of geography have attempted to outline the character of reception. Combined they have shown that there are no determining features of reception: reading and reviewing are shaped by the particularities of space and time, by the individuals involved, and by the physical features of a specific text. In this chapter, I have similarly illustrated the specificities of atlas reception, drawing on various sources to understand the reasons why certain atlases were interpreted as they were and by whom these processes of reading and reviewing were carried out.

To study reception in its truest sense, as an indicator of how people read texts and what their interpretations were and why, we require evidence of reader-text encounters. As illustrated in my study of school atlases, this is not always available. This chapter has shown that in paying attention to interactions between individual readers/reviewers, mapmakers, and publishers we can consider that reception has meaning in addition to readers' (private and public) interpretations and beyond readers' immediate impact (through marginalia) on the published text. Reading and reviewing were in fact processes conducted in atlas production.

Thinking about reception in this way, from a production based perspective, blurs the divisions—which are often set up and necessary to analyse production and reception—between, firstly, reader and author; secondly, production and reception; and thirdly, between reading and reviewing. In relation to the first, there was a constant dialogue between 'reader' and 'author': readers of school atlases were engaged in acts of authorship, notably not through their inscriptions in the margins of texts—at least not that we have evidence of—but through direct communication with producers. These conversations became part of the production process, producers sometimes incorporating readers' suggestions into a new edition or rejecting them as irrelevant or unfeasible. What is important to note here is that the reader was evidently not a passive subject, neither in a text's reception, as Fish and many other scholars studying the history of reception have shown, nor, as I have suggested, in the production of texts.[82]

Neither were producers confined to the category 'author': just as readers were capable of assuming an authorial role, through marginalia in the case of Semple's *Influences*, or more directly, as I have shown here, in conversation with producers, so

[82] Chartier (1992); Fish (1980); Iser (2002); Keighren (2010); Livingstone (2007).

too producers became readers, reading and reviewing their own and others' works during atlas production.[83] In this way, and challenging the second division between production and reception, production and reception (reading and reviewing) became one.

Turning to the third division between reading and reviewing, in this chapter I have revealed that reading and reviewing were interconnected processes in the dissemination of geographical knowledge through school atlases. Atlas 'reviewers' read atlases for the specific purpose of reviewing their veracity and usefulness; readers (teachers and others) used (or read) atlases for intellectual and educational purposes but inevitably made judgements on (or reviewed) their style and content; and in the (re)production of school atlases, producers carried out reading and reviewing practices. This consolidates our findings in earlier chapters that school atlases were never finished objects but they were texts constantly read, reviewed and altered by both 'readers' and 'authors', who were conducting these processes of reading and reviewing on both sides of the textual divide, that is, during both production and reception. This brings us back to the point that in the study of atlases, and texts generally, and in the study of a discipline, we must consider together, production history and geography, reception history and geography, as well as knowledge circulation.[84]

[83] Keighren (2010).
[84] Maddrell (2009), 13; Ogborn and Withers (2010), 50.

8

Conclusion: Geography, publishing history, and the production, movement and use of British school atlases (*c.*1870–*c.*1930)

Introduction

In 1923, Bartholomew & Son received instructions from OUP's Bombay branch manager G. F. Cumberlege about the transport of the *Indian school atlas* (*c.*1924) from Edinburgh to India: Bartholomew was to send 7,000 atlases to Bombay, 5,000 to Calcutta and 6,000 to Madras. Cumberlege advised Bartholomew that to protect the atlases from damage during transport, they should be:

> Packed in strong wooden cases lined with waterproof paper. The cases should be of medium size only, since with the last edition we [the OUP] sustained considerable loss through the weight of the books bursting the sides. It would be wise, if possible, to reinforce the nails with metal bands.[1]

John Bartholomew similarly reported the real risk of transporting atlases from Edinburgh to India in a letter in 1925 to Oxford University Press' London publisher E. C. Parnwell. From past experience, Bartholomew knew that 'unless books for that destination [India] are packed in air-tight cases they are most apt to deteriorate during the voyage, especially if not unpacked and aired immediately'.[2]

Despite the caution taken in packaging and preparing atlases for transport in this way, there was always the threat that an entire ship and its cargo would be lost to sea. Bartholomew, for instance, lost its shipment of 3,000 *Indian school atlases* sailing from Glasgow to Calcutta in 1923 aboard the British shipping company Clan Line's *SS Clan Macmaster*, which, according to the Export department of the OUP, was 'wrecked off the Isle of Man'.[3] The atlases lost were immediately replaced and dispatched on another ship, at a cost of over £24 to OUP. The damage to or loss of

[1] NLS, Acc. 10222, Business Record 1128, Incoming Correspondence, G. F.J. Cumberlege to John Bartholomew & son, 10 August 1923.
[2] NLS, Acc. 10222, Business Record 797, Outgoing Correspondence, Bartholomew to E. C. Parnwell, OUP London, 20 June 1925.
[3] NLS, Acc.10222, Business Record 782, Outgoing Correspondence, Oxford University Press' (OUP) Export Department, London, to Bartholomew & Son, 5 October 1923.

school atlases in this way caused not only monetary strain on producers but, since travel took months, this also led to extensive delays and meant audience demand across the Empire could go unmet for extended periods. OUP manager Humphrey Milford thus lamented the loss of Bartholomew's shipment of the *Indian school atlas* aboard the *Clan Macmaster* since it meant delay in meeting demand that was 'acutely felt in India', and OUP's Indian branch manager, Carrington, vehemently advised 'the necessity of making every effort to get the cases away at the very earliest moment'.[4]

This vignette on the transportation of the *Indian school atlas* sheds light on the perils of transport: school atlases, as we have seen, moved *between* their sites of production in the UK and the locations of intended audiences throughout the Empire, but their arrival intact or at all was not guaranteed. School atlases were subject to accident and misfortune as they were transported between distinct locations.

In this thesis I have shown that as well as such coincidental and inevitable aspects of knowledge production, movement and use, atlas production and reception were shaped too by intentional and conscious moulding of narrative and stylistic features from both producers and readers. This thesis set out to understand the 'who', 'what', and 'where' of these moments in which atlas style and content were made to reflect and 'fit' into specific ways of seeing and working within particular interpretive communities. What we have seen in the atlases presented here are the many different individuals and bodies involved in production; the iterative nature of communication between these producers; and the influence of producers' and readers' distinct intellectual, professional and personal backgrounds on the material format and content of school atlases.

Questions of authorship arising from these associations between mapmaker, publisher, geographer, other professionals, and individual institutions were negotiated not only in epistolary exchanges, such as those in relation to the *Indian school atlas*, but in the texts themselves—in their drafted form and in their published state. Concerns with font size, the position of names, the credibility of editors, and the type and number of maps to be included in any one atlas were linked to personal

[4] NLS, Acc.10222, Business Record 782, Outgoing Correspondence, Humphrey Milford to J. Bartholomew, 27 July 1923.

agendas to receive credit for 'work' done, but such concerns were, at the same time, often an attempt to achieve an authoritative voice and to have one's views of geography, and the world generally, in plain sight and accessible to a learning public.

There was no guarantee, however, that producers' intentions would be interpreted by atlas users. The idea of the fixity of knowledge in print has been greatly challenged by acknowledgement that knowledge does, and in many ways it must, change as it moves from author to reader, from one place to another.[5] I have shown here that school atlases were differently made for people in distinct locations throughout the Empire; producers anticipated and responded to perceived and actual readers' demands for relevant geographical knowledge. School atlases—and the records of their production—are indicators of this geography of reading.

This thesis has also shown that as well as producers' response to 'implicit readers', as Darnton puts it in his communications circuit, readers also played a role in production through their reading and reviewing activities.[6] The perspective taken here on readers' influence on a text's meaning was production-based. This has contributed to recent challenges to the strict boundaries established between author and reader, production and reception, and reading and reviewing.[7]

A historical geography of school atlases

In this thesis I have shown that the production of school atlases was embedded in the situated practices of geography's disciplinary development, whether at different times it was shaped by the involvement of an individual geographer or by the activities of a supporting institution. As has been considered in relation to school textbooks, school atlases were textual manifestations of interactions between various people and bodies moulding geography's character in the universities and schools, from geography's professionals to school teachers, publisher-mapmakers, geographical societies, and other professionals and bodies.[8] In my interpretation of school atlases I have thus situated them in relation to the interaction between university geography, geography's teaching in schools, and geographical publishing.

[5] Johns (1998); Keighren (2010); Livingstone (2005, 2008); Rupke (2000); Secord (2000, 2004).
[6] Darnton (1982), 11.
[7] See, for example, Withers (2005); Withers and Keighren (2011).
[8] Maddrell (1998).

Conclusion

The association between school and university geography has been indicated, in part, through the role of the Oxford (and other) Summer Schools, operated by geography's professionals and aiding the development of geography in both arenas. 'As geography emerged as a university discipline, school teachers were the main constituency for geographical training and most of the first generation of academics wrote school textbooks'.[9] Summer Schools facilitated, and prompted, the nexus between professional geographers and teachers. Yet this exchange of knowledge and skill did not simply take the form of transfer from university/professional geographer to teacher, not least because some of those instructing attendees were teachers themselves. The Summer School of Civics in Dublin, for example, is just one example of a summer school which had teachers organising and delivering lectures.[10] In fact, this link between university and school geography, professional geographer and teacher, was less fixed, more fluid, and often more complicated than is often recognised in histories of geography.

The complex nature of the link between school and university geography was recognised by professional geographers attempting to address the limited success of geography in these two arenas. In 1902, Herbertson saw an intimate connection between the fate of school and university geography:

> In our country the geographer in the university is hampered at every turn by the insufficient teaching of geography in our schools, which again by a vicious circle is due to its neglect in the university, so that on the one hand teachers have had no training in geography, and on the other depreciate the subject as not a "paying" one.[11]

This was a view also held by Newbigin, editor of the *Scottish Geographical Magazine*, when she described 'the vicious circle' between the difficulty of obtaining teaching qualifications, the subsequent inadequacy of trained teachers, and the poor state of geography in schools.[12] Publisher-mapmakers also had an opinion on geography's entangled progress in schools and universities, voiced by Bartholomew in 1905 in his circular on the need for a Chair of Geography in the University of Edinburgh:

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[9] Maddrell (2009), 128.
[10] Anonymous (1914).
[11] Herbertson (1902a), 128.
[12] Newbigin (1925), 28.

> The efficient teaching of geography in our schools and colleges is one of the most urgent needs of our time, affecting the political and commercial welfare of the empire, and it is believed that the subject cannot be satisfactorily dealt with until our universities take it up and provide, in the first place, adequate training for teachers.[13]

For Bartholomew, and for his agenda to establish geography at Edinburgh, the relationship between school and university geography was less mutual than Mackinder and Newbigin suggested but, rather, the responsibility for improved school geography was first and foremost the Universities'.

Intertwined with this exchange between school and university geography was the discipline's publishing activities. As we have already seen in the preceding chapters, John Scott Keltie continuously made connections between the progress of geography in the universities, which saw the emergence of 'young geographers', and the production, by these professionals and by publisher-mapmakers, of school texts.[14] Geography teachers also had an opinion on this exchange between the progress of geography in the universities, the emergence of improved school texts (including atlases), and the subject's development as a subject in schools. When in 1919, Fleure, who was at this time Professor of Anthropology and Geography at the University of Aberystwyth, invited teachers to respond to a questionnaire sent on behalf of the Geographical Association (GA) in order 'to have the opinions of educational experts as to what are the chief needs to teachers in elementary and secondary schools and in training colleges', teachers were keen to voice the shortage of appropriate apparatus (including atlases).[15]

Teachers saw publisher-mapmakers as holding the baton for geography's progress since it was within their ability to improve the texts available. The success of publishers' attempts to do this was variously judged: teacher E. Joad believed there were already 'good text-books and atlases on the market' but teachers need assistance in making 'a wise selection'.[16] In contrast, for teacher J. Bould there were

[13] NLS, Acc.10222, Business Record 924, Incoming correspondence, Circular on the chair of geography, June 1905.
[14] Keltie (1885; 1917).
[15] SCRO, GA, 1988/60, Item 16, Fleure to T. Howard (GA member), 27 January 1919.
[16] SCRO, GA, 1988/60, Item 16, E. Joad to Howard, 28 January 1919.

few ‘satisfactory’ atlases available owing to the absence of ‘an inset of England on the same scale’ in each map and the continued use of the Mercator projection.[17]

The point here, as I have shown in the preceding chapters, is that there was no set progression from school to university geography—improvement in one did not easily solve the problems of the other, and neither was their relationship a matter of exchange of knowledge and skill from geography professional to teacher (nor vice versa). But there was in this period an intimate association between university and school geography and between those involved in shaping their character and scope (professional geographers, publisher-mapmakers, and teachers). At the same time, there was a connection between geography’s disciplinary realms (universities and schools) and the provision and nature of its texts, including school atlases, facilitated by publisher-mapmakers’ involvement in geography’s development as a discipline, by professional geographers’ role in atlas production, and through the use of school atlases by those teaching geography in schools. In this thesis, I have addressed the complex interconnection between these arenas of geographical knowledge and geographical publishing by paying attention to the production of specific school atlases and the different people and processes involved.

A book history approach to the history of geography’s texts

In order to interpret school atlases in this way—in terms of the different people involved and their particular intellectual and professional backgrounds—I have relied heavily on concepts in book history. In this thesis, school atlases have been studied as a particular genre of mapbook and a particular type of school text. This approach is also informed by the central importance of publishers’ archives to my interpretation. In this way, I have drawn attention to the possibility of conducting histories of other publishers’ geographical works or publishing histories of other intellectual disciplines, similarly examining the textual manifestations of other disciplines and illuminating the individuals and institutions influencing the nature of knowledge presented.

Book history’s utility in an analysis of maps and ‘texts’, generally, has been recognised by historians of geography’s texts and by a number of map historians,

[17] SCRO, GA, 1988/60, Item 16, J. Bould, to Howard, 29 January 1919.

although in map and atlas history there has been more focus on the contextual influences on production, even if the many people involved in production are acknowledged.[18] This approach in map history was summed up by Cosgrove, who pointed to the 'considerable attention . . . given in recent years to the power-knowledge relations involved in mapping's selectiveness: to the social and environmental exclusions involved in European colonial mapping, for instance'. Cosgrove's alternative to this preoccupation with contextual influences on maps was to consider the 'issues of accuracy, truthfulness, significance and the moral integrity of those conveying necessarily fragmentary information from the periphery, in the extended chain of knowledge making and recording which constituted the mapping process'.[19] There is, in other words, a need to recognise that maps were dependent on more than the 'explicit' agendas of the powerful or the 'implicit' decisions involved in the production process: they were bound up in questions about the credibility of knowledge, and the 'authoring' of maps, and these questions were proposed, negotiated and challenged by the individuals involved in production.

To use Harley's idea about the silences in maps, if we study more closely, as I have, the people involved in determining the style and content of maps and atlases, we can begin to understand that the selection of information to be included was a matter of constant communication between mapmakers, publishers, geographers, other professionals, institutions, and readers.[20] Maps and atlases were of course influenced by broader political and cultural trends—most school atlases including a map of the British Empire—but they were also influenced by different views about the role and designation of 'author'; issues of knowledge credibility; readers' distinct locations throughout the Empire; demands for relevant knowledge; and particular views on the meaning and scope of geography. This study has revealed that a solely contextual approach to geography and geography's texts is not enough without attention to how cognitive content circulated between producers, and between producers and readers, and was amended and transformed accordingly.

Acknowledging the people and communicative interactions involved in the production of school atlases means that we avoid a simple historical geography of

[18] Mayhew (2007a); Edney (2007).
[19] Cosgrove (1999), 11.
[20] Harley (1988).

atlas progress and of geography's development in the universities and schools. My focus has been less with 'pedigrees' of geography, which attach the provenance of geographical approaches to certain periods, to specific individuals or to certain texts (in my case) and, rather, more with tracing the 'doing' of geography in ways closer in nature to 'genealogies', revealing the intricacies of geography's development and the multifarious nature of its episteme and pedagogy.[21] Whilst I have given attention to some individuals more than to others and have highlighted general trends in the style and content of atlases, in the analysis of individual school atlases I have acknowledged the 'messiness' of their provenance. In my attempt to understand the geographical ideas contained in a school atlas and in my interpretation of its production, movement and use, geography and school atlas development are considered in relation to different individuals and through different eyes.

Within a 'genealogical' approach to the history of geography and geography's texts, we can acknowledge the dependency of our claims on the 'contingencies of evidentiary survival'.[22] My knowledge of geography and, specifically, school atlases directly relates to the materials, namely publishers' archives, that have survived; their availability; and my own conscious reconstitution of these evidentiary fragments as I attempt to interpret them, influenced by my own personal archive and previous experience.[23] The Bartholomew Archive, upon which many of the claims made in this thesis are based, presents a partial record of the people and processes involved in the production and use of school atlases (also noted in 2). Materials in the Bartholomew Archive and in other collections were also at times anonymous or undated preventing, *ipso facto*, a complete understanding of their content. Combined with my own time limitations and the implausibility of studying every school atlas or manuscript held at the Bartholomew Archive, or elsewhere, it is therefore unreasonable to suggest that my thesis presents a complete overview of school atlas production in the late nineteenth and early twentieth centuries. My study, rather, was framed as a consideration of British school atlases in

[21] See Mayhew (2011) for an exposition on the ways geographers construct geography's histories and a consideration of an alternative approach.
[22] Mayhew (2011), 35.
[23] For more on constructing the archive, see Withers (2002b), 305.

the light of the people and communicative interactions upon which knowledge production, movement and use depended.

Nor have I considered every element of school atlas production. There might be a need in a fuller study to address aspects which thread through this thesis but which are not explicitly acknowledged, such as the issue of gender. Gender was a discourse that ran, concomitantly, with other discursive influences in the production of school atlases. Historians of geography's textbooks have studied the role played by gender in the construction of knowledge, and this thesis has acknowledged its influence.[24] Gender was a defining narrative in texts, just as race, for example, but it was often only implicit. Race was evident in the colours used in maps or in rhetoric about Lamarckian and Darwinian explanations for racial difference. Gender was also a feature that underlay other, at times equally implicit, discourses, including 'authorship' or credibility. In the case of gender, as is often the way, the historical record illustrates a 'forgetfulness', which in many ways determines the claims that can be made about the role women played in atlas production and about their personal and intellectual motivations and their interactions with others. This absence of evidence, however, is not evidence of absence and I have illustrated, where possible, the role women played in the production of school atlases and in the moulding of geography as a discipline. This has been greatly assisted by Maddrell's recent explication of female geographers' presence, alongside their better-known male counterparts, in the universities, journals and schools of the late nineteenth and early twentieth centuries.[25]

To understand geography's gendered character it is necessary, as I have done in this thesis, to look at individuals' views and specific instances (in text form) of gender's control on the production of geographical knowledge. Gender was at different times, and in the eyes of different people, more or less influential on atlas production and on the nature of geographical knowledge presented. Responding to a paper delivered by Reynolds on the value of fieldwork in geographical education, Lionel William Lyde (Professor of Economic Geography and one producer of the *School economic atlas* (1910), chapter 4), responded by stating that fieldwork was

[24] Maddrell (1998, 2009); Ploskasja (1999).
[25] Maddrell (2009).

not suited to boys since 'boys regarded it as a picnic', more interested in 'commercial geography—railways, ships, apples etc.'.[26] Lyde's comments present a gendered interpretation of geography's nature and scope, favouring a different approach for boys than for girls. Lyde's response, we must remember, was shaped by his experience as senior English master at the all-boys Merchiston Castle School, Edinburgh from 1890 to 1903.[27] His experience of teaching boys greatly influenced his school texts, including his *Economic atlas*, which he assumed would be used by 'boys' learning geography.[28] The narrative in this atlas, however, was also closely aligned with Lyde's polemic that geography should be taught from an 'economic' rather than 'commercial' perspective. From Bartholomew's extant production records, and thus what formed the focus of my study of Lyde's atlas, it was largely Lyde's specific geographical (and economic) approach that shaped map order, map content and the material features of the *School economic atlas*—although we must recognise that his perspective was inherently connected to aspects of gender (see chapter 4).

A material hermeneutics of school atlases

Another aspect forming a central part of my study of school atlases has been the meaning residing in textual format and in paratextual features like title, prefaces, introductions, images, and font. Material format has been a topic of concern for historians of geography, namely Mayhew, highlighting the interconnection between geography's disciplinary development and geography's textual traditions for nineteenth century geography textbooks. Drawing on ideas in book history on material hermeneutics, we can consider how the reproduction of a text was subject to the reordering and addition of material features and content. We know that this change to the physical text was also carried out by readers during their private reading of texts, such as through readers' marginalia in response to a book's claims.[29]

[26] Anonymous (1902b), 88.
[27] Clout (2011).
[28] In the introductory text to the *School economic atlas* (1910, ii) Lyde assured users that the atlas contained all 'the material that is of most use to the average *boy* in his subsequent career'.
[29] Mayhew (2007a, 2007b); McGann (1991); Genette (2007); Keighren (2010).

Harley, studying the history of imperial mapping, also pointed to the importance of studying the imagery and symbolism in the margins of maps.[30]

I have in this thesis argued that material form was influenced not just by intellectual developments (as Mayhew has shown); nor only by imperial, political, and cultural developments (as Harley notes in relation to the margins of maps); nor only by the encounter between text and reader (evident in marginalia in texts).[31] It was also shaped by producers' attempts to situate atlases within the reach of particular interpretive communities through changes to the order of maps and the extent of maps covering readers' place of residence. The fluidity of material format and of other prefatory features, including title pages, thus made the atlas capable of translation from one place to another. Reprints of the *Atlas for South African schools* (1899), for example, were characterised by changes in its preparatory features related, in part, to its publication by different publishers. The atlas was published first by Thomas Nelson and Sons but in certain printed copies Nelson's name was appended to a Cape Town or Johannesburg publisher, including Darter Bros. and Co.; J. C. Juta and Co.; T. Maskew Miller; Groccott and Sherry; and Deale Brothers, with the purpose of creating a means for the translation of the atlas between its British producers and its intended South African audience.[32]

In other atlases, it was the introductory text, rather than the title page, which became a site of textual transformation. This was employed by atlas producers in order to change the meaning of the maps contained in an atlas between editions, without changing the content of the maps themselves. In *Macmillan's atlas for Indian schools* (1897), for example, the map content remained unchanged: it was the introductory letterpress that incorporated attempts to provide the most recent geographical knowledge.[33] In the 1908 edition, readers could see population statistics from 1901 and India's linguistic divisions in 1904; the 1918 edition provided 'contemporary' information, updating population and linguistic information to include, respectively, 1911 and 1912 data, and the extent of the Indian railway

[30] Harley (1989a).
[31] Mayhew (2007a, 2007b); Harley (1989a); Keghren (2010) on marginalia in Semple's *Influences*.
[32] NLS, Acc.10222, Printing Record (PR), 1–72b, 1880–1930.
[33] *Macmillan's atlas for Indian schools* (1897), i.

between 1913 and 1914.[34] What I have shown here is that these small changes in the prefatory features of school atlases were facilitated by and they were at the same time necessary to the practice of Bartholomew and other mapmaker-publishers of reusing and recycling maps, images, literary text, and entire atlases for different publishers and/or for distinct audiences.

This reordering, altering and transformation of atlases helps us to confirm the view that 'every text had variants of itself screaming to get out, or antithetical texts waiting to make themselves known' and it also illustrates, as I have shown in this thesis, that 'texts are best approached intimately, and with special care for what makes them appear to us sui generic'.[35] In my study of specific school atlases, I have made little attempt to outline their standard features—although I have dealt (in chapter 3) with the desire for standardisation in form and content among atlas producers and users. My work consolidates McGann's findings that it is not possible to establish a fixed theory of why texts appear as they do but, rather, I have interpreted the general frameworks within which knowledge was produced, moved, transformed, and used.[36] In the case of school atlases, this framework was subject to the involvement of individuals with different views about geography and it was shaped by the changing discourses through which geography was itself framed. From my findings, it is clear that 'textuality'—the nature of texts—'is a social condition of various times, places, and persons', and this thesis has been an attempt to pay attention to the 'sociology' of school atlases in their historical and geographical contexts.[37]

The sociology and 'reception' of school atlases

This study of school atlases is thus a sociology of texts that takes into account the importance of the people producing and reading them, as well as recognising how these people were connected to the format the works took and the knowledge they communicated. In thinking critically about the role of 'mapmaker', 'publisher',

[34] NLS, Acc.10222, PR, 44b, folio 158, front cover, contents and part of letterpress for *Macmillan's atlas for Indian schools*, 24 October,1908; PR, 58a, folio 83–84, front cover, contents and part of letterpress for *Macmillan's atlas for Indian schools*, 15 February 1918.
[35] McGann (1991), 10, 16.
[36] McGann (1991).
[37] McGann (1991), 16; see McKenzie (1986) for more on the 'sociology of texts'.

'editor', 'engraver', 'geographer', other professionals, and institutions in the production of school atlases, and the relationships between them, we can begin to challenge the strict categories in Darton's communication circuit (see chapter 2, 22), including adding to it the role of 'mapmaker' and 'educational and/or geographical institution'.[38] I have shown that the 'authoring' of school atlases was a process conducted by different individuals with differing views about the meaning of 'author', and with particular discursive influences on the geographical knowledge presented in any atlas.

The 'editor' was at times a geographer with an agenda to promote his (or her) view of geography and whose voice was the most authoritative. When we look closely at the published text and at its production, however, we find that the 'appearance' of one dominant voice/author was a result of negotiations between different people engaged in production, some of whom received notification in the published text, some of whom did not. At other times, the editor was a name on the atlas—whether an individual's or a geographical and/or education body's—with some association to the subject at hand, sometimes replacing the name of the person who actually carried out editorial processes, and becoming a guarantor of credible geographical knowledge. In other cases, the mapmaker and/or publisher had most influence on atlas style and content, whether they were given credit in the title page or not. In this thesis I appeal, as have others elsewhere, for attention to be given in studies of publishers' archives to the processes of authoring 'behind' printed books; to the precariousness in historical contexts of the category 'geographical author'; and to the constitutive and relational processes of authoring.[39] Author was a process more than it was a strict category of production.

This thesis also contributes to 'reception' histories of geography's books. There is, however, an absence of atlas reception in the 'true' sense of the term, the result of almost no marginalia on the books themselves or opinions expressed by individual readers in private diaries.[40] In this sense I have not conducted a reception history of school atlases. Yet I have addressed questions of reading and reviewing raised by historians of the book, of science and of geography, which illuminate

[38] Darnton (1982).
[39] Withers and Keighren (2011), 569.
[40] See Keighren (2010); Gingerich (2004).

further the complexity of categories like 'author', 'reader', 'publisher', 'editor', and 'mapmaker'. I have argued that concerns in the history of the book, history of science and history of geography over the translation and reception of knowledge can be addressed, in part, through analysis of production, for as has already been said: 'production, circulation and consumption need to be considered together'.[41] In part, my chapters follow a rough pattern from production, to movement and use of school atlases, but this neat division is more a matter of practicality than a reflection of these as discrete processes.

I have also highlighted the part played in book production by reading and reviewing.[42] Reviewing was a process carried out by both readers and producers: for the former, their reviews were directed at specific published atlases, addressed directly or indirectly to producers, with the intention (sometimes successfully and sometimes not) of inciting a change to the style and/or content of subsequent editions of an atlas. Reading and reviewing, however, were also part of the production of school atlases even before the atlas was published and was subject to critical interpretation. These were part of producers' negotiations, processes conducted through their communicative interactions during production: producers annotated draft copies of atlases, corrected mistakes on mock-ups, and interpreted and judged others' atlases to compare with, and seek ideas for, their own atlases. At the suggestion of Nelson's Australian representative, Nelson's director George Graham sent Bartholomew copies of both George Philip's and William Collin's atlases for Australia to assist the production of a 'superior' Australian edition of *Nelson's school atlas* (1930).[43] Similarly, Nelson's South African representative Mr Gedling revealed that Nelson's *Atlas for South African schools* (1899) no longer dominated the South African market: 'now both Philips and McDougall have African Editions of their atlases, which knock ours'.[44] To combat this loss of sales Gedling sent to Nelson the two atlases in question, aiding Bartholomew's commission to make a South African edition of *Nelson's School atlas* (1930) that would hold a superior position to its competitors.

[41] Ogborn and Withers (2010), 50.
[42] Withers (2005); Withers and Keighren (2011).
[43] EUL, CRC, GB 237 Coll-25, Letter book 23, Graham to Mr. F. Wright, Melbourne, 16 January 1928.
[44] EUL, CRC, GB 237 Coll-25, Letter book 205, Graham to John Bartholomew & son, 4 April 1928.

This interfacing/interlacing and 'bleeding' between texts—the conceptual transfer of knowledge from one to another—which Livingstone elucidates in relation to the reception of particular texts, was part of the production process. [45] In this case, it was the publishers, mapmakers, geographers and other professionals—rather than readers alone—who brought reading histories to their (re)production of school atlases. In addition, in school atlas production the transfer of knowledge from one text to another was paired with the literal reusing of maps, images, and literary text from one successful atlas edition to a separate atlas for a distinct audience (as illustrated in chapter 3). There was thus an element of experiential affinity in atlas production, tied up in the idea of reading histories but bound also to the practice of 'doing' atlas production, of knowing one's readership, and of understanding what would make a profit and sell. Bartholomew's managing director Graham Robinson, referring to Dent & Son's *Canadian school atlas* (1922), thus advised H. R. Dent stating:

> The question of cheapening the Canadian atlas . . . would, we fear, completely spoil the whole appearance of the work. All the difference that would be made by thinning the paper would really be very trifling, and we are honestly much averse to supply an inferior piece of work for the sake of such trifling saving, which, after all, might turn out to be no saving at all if it had the effect, as undoubtedly it would through time, of lessening the sale.[46]

Conclusion: a publishing history of school atlases

The materials used in the *Canadian school atlas* were influenced by Robinson's past knowledge of readers' demands: for him, school atlas users wanted a cheap atlas without loss of quality. This thesis has shown how these records of the Bartholomew firm shed light on the processes through which producers made decisions on style and content—from concerns about 'authorship' and credibility, to demands for relevant knowledge, and desires to ensure a profit. These aspects of knowledge production and use have been studied by historians of the book, historians of geography and, to some extent, by map historians in relation to specific 'texts'. School atlases—both 'books' of geography and books of maps—have hitherto received limited attention with regards to the people and processes through which

[45] Livingstone (2005).
[46] NLS, Acc.10222, Business Record 795, Outgoing Correspondence, Robinson to Hugh R. Dent, London, 17 May 1924:

knowledge was produced, moved and used in particular times and places. The purpose of this thesis has been to address this hiatus in the history of atlases and the history of geography and to apply concepts in these fields and in book history to understanding this genre of text and mapbook.

At the same time, this concern to date with text-based 'devices' used in school geography might be extended to include the largely neglected technologies in the classroom which shaped the way knowledge was received, not simply through acts of reading but often through pupils' 'use' of these devices, such as globes, photographs, wall maps, cinematography, lantern slides, playing cards, and models (the last having been addressed by Ploszajska).[47] Other instruments were utilised by geography teachers and students in their fieldwork activities: the role of regional survey in geography education has been considered elsewhere, but there is potential for a combined history of technology and history of science approach to pupils' use of theodolites, compasses, cameras, and so on, as they attempted to 'explore' and 'know' their local surroundings, mimicking the rhetoric and activities of explorers and scientists in the late nineteenth and early twentieth centuries.[48] This is based on the idea that instruments influenced the construction of scientific knowledge since 'because instruments determine what can be done, they also determine to some extent what can be thought'.[49] There is also scope to bring a study of school apparatus into the late twentieth century to allow access to the opinions of teachers and pupils, providing greater insight into how particular geographical devices were used and how they informed individuals' understanding of the world.[50] At the same time, recent work highlighting the neglect of women geographers in historical geographies of the discipline leads the way for a greater focus on female teachers and geographers who were instrumental in the production and transmission of geographical knowledge, which this thesis has done only in part.[51]

My analysis of how and through whom school atlases were made to move across the Empire, dependent on exchanges of knowledge between producers in

[47] Ploszajska (1996, 1999).
[48] See Ploszajska (1998) on fieldwork in school geography.
[49] Van Helden and Hankins (1994), 4.
[50] This has been done in part by Ploszajska (1999) in relation to textbooks but there is room for analysis of other apparatus.
[51] See Maddrell (2009).

distinct sites, has also illuminated an understudied international network of communication between mapmaker-publishers. *Goode's American school atlas* (1925, see chapter 7) was, from its conception, embedded in John Paul Goode's association with John George Bartholomew, and it was part of a bigger cohort of geography texts which were the result of American-British collaboration. These texts have been illustrated in Dahmann's bibliography of texts and other apparatus used in America's schools, libraries and homes.[52] Dahmann's book provides a means to consider these works in relation to the themes covered in my study of school atlases.

My brief encounter here with British-American relations in the publishing of school texts reveals that transfers of knowledge in textual form between America and Britain were evident in four ways. The first was the re-publishing of British geography texts by American publishers, who adapted them to American readers: English cartographer Aaron Arrowsmith's *A new and elegant general atlas of North America* (1804), for example, was reissued by Thomas and Andrews of Boston.[53] The second process of transfer was evident in the reprinting of Scottish geologist Archibald Geikie's *Elementary Lessons in Physical Geography* by Macmillan's New York branch—a British Firm with an American connection—altering style and content to make them suitable for American users.[54]

The third form of American-British relations was the use of American texts in Britain, illustrated by Hariet Beecher Stowe's *First Geography for Children in the US,* which was published in the US in 1855 and then subsequently for British pupils with the new title *A New Geography for Children*. British users were assured of its relevance by the statement in the title page that it had been 'Revised by an English Lady'.[55] Fourthly and finally, interactions between British and American geographers and writers in the production of school texts also took the form of more collaborative relations: George Goudie Chisholm, Professor of Geography at the University of Edinburgh and Charles Henry Leete, fellow of the American Geographical Society, joined forces with British firm Longmans, Green and Co. to

[52] Dahmann (2011).
[53] Dahmann (2011), 83.
[54] Dahmann (2011), 70; see also Sher (2007) on British-American relations in book production during the Enlightenment, particularly chapter 8.
[55] Dahmann (2011), 23.

produce *Longmans' school geography for North America* (which was accompanied by *Longman's new school alas,* 1902).[56]

These international networks remind us that the communicative nature of school atlas production, raised in this thesis, challenges the idea of a complete and stable geographical text. School atlases were hybrid texts, dependent on existing works, altered continuously to meet readers' perceived and actual demands, and subject to the changeable nature of geographical knowledge. Since 'there are no determinate meanings and . . . the stability of the text is an illusion', there is a need to consider the specificities of a text's production in relation to the people and processes through which they were made, moved and used.[57] In this thesis I have paid attention to the value of publishers' production records in studying the production, movement and use of school atlases, and have illustrated their importance in understanding the relations between 'text', 'reader' and 'author', which lie behind and within the making of geography's books.

[56] Dahmann (2011), 47.
[57] Fish (1980), 312.

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